

France held its breath - for FFr4bn

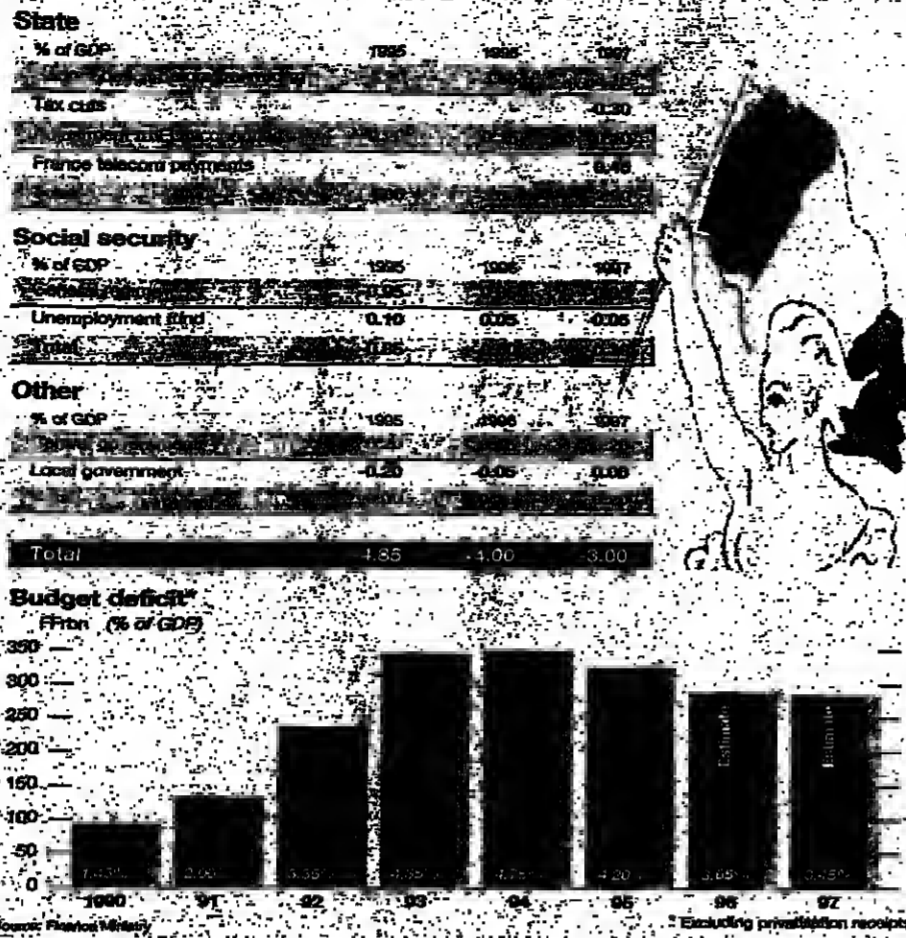
After one of the longest and most dramatised preparations for any budget, the French government yesterday produced a fiscal blueprint for 1997 that reduces the central state budget deficit by a mere FFr4bn (\$787m).

A belated decision to start cutting taxes next year, in an attempt to revive the economy and woo voters for the 1998 parliamentary polls, forced the government to drop its earlier goal of reducing the deficit to FFr245bn. Instead, next year's budgetary shortfall is expected to be FFr283.7bn, compared with its target of FFr288bn this year.

Yet, Mr Jean Arthuis, the finance minister, stressed that he was still confident the overall deficit on the combined accounts of central and local government and the social security system would still be no more than 3 per cent of gross domestic product next year, sufficient to qualify the country for economic and monetary union in 1999. The definition of a deficit, under the Maastricht treaty, appears to allow France to count in a big one-off payment from France Télécom and certain other funds.

Mr Alain Juppé, the prime minister, had started as early as May to prepare France's political, business and union leaders for the first real cut in public spending in the Fifth Republic's 38-year history, such was, and still is, the government's

France's overall public deficit



determination to be a founder member of Emu, a largely French-inspired project.

However, the economy began to flag, with growth falling by 0.4 per cent in the second quarter, unemploy-

ment rose again to near-record levels, and successive small drops in consumer prices in June, July and

August prompted talk of deflation. The prime minister found himself under growing pressure from his backbenchers and indeed President Jacques Chirac to bring forward long-promised tax cuts. Earlier this month he announced a first FFr25bn slice off general income tax rates in 1997. Once that decision was taken last month, the FFr245bn deficit target became unachievable.

But the government has at least kept its promise to hold spending next year at last year's level of FFr1,569bn. Given inflation estimated at 1.5 per cent next year, this means a cut in real terms. To offset increases in debt servicing and civil service pay - which Mr Juppé will relax next year after this year's public wage freeze - the government had to find savings of FFr60bn from what ministries, under existing policies, would have otherwise spent in 1997.

It still plans to increase job-creation subsidies next year, but by FFr15bn less than it had planned to do. As with employment policies, it is also making housing subsidies more selective. Anxious to avoid trouble with the teachers, the government is to spend 2 per cent more on education, but is to cut by around 4 per cent money for the interior and foreign ministries.

The 1997 draft budget is based on an assumption that the economy, predicted to grow by 1.3 per cent this

year, will expand by 2.3 per cent next year. Mr Arthuis called this forecast "prudent and realistic".

But the tax cut stimulus will not be great. In addition to the FFr25bn which the government is to leave in income taxpayers' pockets next year, there will be a carryover in 1997 from some consumption-boosting measures decided by the government after last December's disastrous public sector strikes. But offsetting this will be new social security charges, tobacco and alcohol taxes next year totalling FFr13bn. Proceeds from the latter two "health" taxes are to be funnelled into the social security system to help bring its deficit down from FFr50bn this year to FFr20bn next year.

The 1997 budget measures are likely to come under fire from the public sector unions, upset by the government's decision to cut the 2.2m strong civil service by 3,000 next year, and from within Mr Juppé's own centre-right parliamentary majority, some of whom would have liked deeper tax cuts in the run-up to the 1998 elections.

But as Mr Arthuis said almost pleadingly yesterday, "if anyone thinks we could have done more to cut taxes next year, I would like to hear where we could possibly have cut spending more" to allow for bigger tax cuts.

David Buchan

Call to convert into euros in 1999

Pressure on Bonn over DM bonds

By Gillian Tett and Richard Lapper in London

Pressure is mounting on the German government to announce it will convert D-Mark government bonds into euros as soon as European monetary union starts in 1999.

Such a move, which follows similar action by France, could further boost the credibility of Emu and also help prevent Paris gaining a competitive edge over Frankfurt in the battle for the continent's capital markets business.

The proposal has generated deep unease in the German finance ministry, which will take the decision. It fears the move could prove unpopular among German investors.

German banks and market traders have been pressing the government to "re-denominate" D-Mark bonds into euros for the past few months; it is understood Bundesbank officials will advise the German finance ministry to take the step after widely discussing the issue in recent weeks.

The Bundesbank has refused to comment on the issue but has privately indicated it supports some early conversion.

Mr Ernst Welteke, a member of the Bundesbank council, said last week: "So that we do not have split markets, I urge speedy switch-over of bonds into the new euro currency."

Yesterday, a spokesman for the Deutsche Börse, Germany's stock exchange, said he was confident a decision to re-denominate existing D-Mark denominated debt in 1999 would be taken by the end of this year.

The issue has become significant for the financial markets recently, because of a split between the stance taken by the French

and German governments. Last year, European governments announced all new public-sector debt would be issued in the single currency, the euro, after 1999. But they did not indicate what would happen to the stock of outstanding government bonds in currencies such as the D-Mark which expire after 1999.

The French government has announced it will convert all its outstanding public debt in francs to euros in 1999. This will create a pool of liquidity in euros, which should help Paris in its efforts to become a centre for trading in euro-denominated money market and debt instruments, as well as bond futures contracts.

French bankers also recently persuaded the European Commission to stipulate in its legal proposals for Emu that governments could have powers to convert the markets.

But so far, the German government has refused to follow the French lead in calling for early re-denomination.

Some German officials fear euro debts would be more expensive to service than D-Mark debt. There is also concern that German investors would shun euro debts, particularly since the conversion from D-marks to euros is likely to result in ugly numbers.

One economist involved in the discussions said: "I cannot see the German government rushing into this, it is a very delicate matter." But some big German banks, such as Deutsche Bank, are now pressing for the early conversion of the most liquid part of the German government debt.

Traders fear that if Paris creates a pool of liquidity in euros before Frankfurt, this could give French markets a competitive edge.

The magic of Maastrichtian mathematics...

By David Buchan in Paris

The French government has fully exploited the magic of Maastrichtian mathematics to convert a projected 1997 state budget deficit of 3.45 per cent of GDP into an overall public deficit of 3 per cent, the exact figure required to qualify to join the EU's economic and monetary union. France so far meets all other Maastricht criteria on debt, inflation, interest and exchange rates. Some unkind spirits might

conclude that the 1997 budget had been concocted in Versailles' Hall of Mirrors rather than the finance ministry's four fortress at Bercy. However, Mr Jean Arthuis and his team have taken full advantage of the fact that the EU definition of a deficit goes wider than the gap between current spending and revenue. This holds a country's overall public deficit to be the total amount it needs to borrow to cover the gap between the change in its total liabilities and the

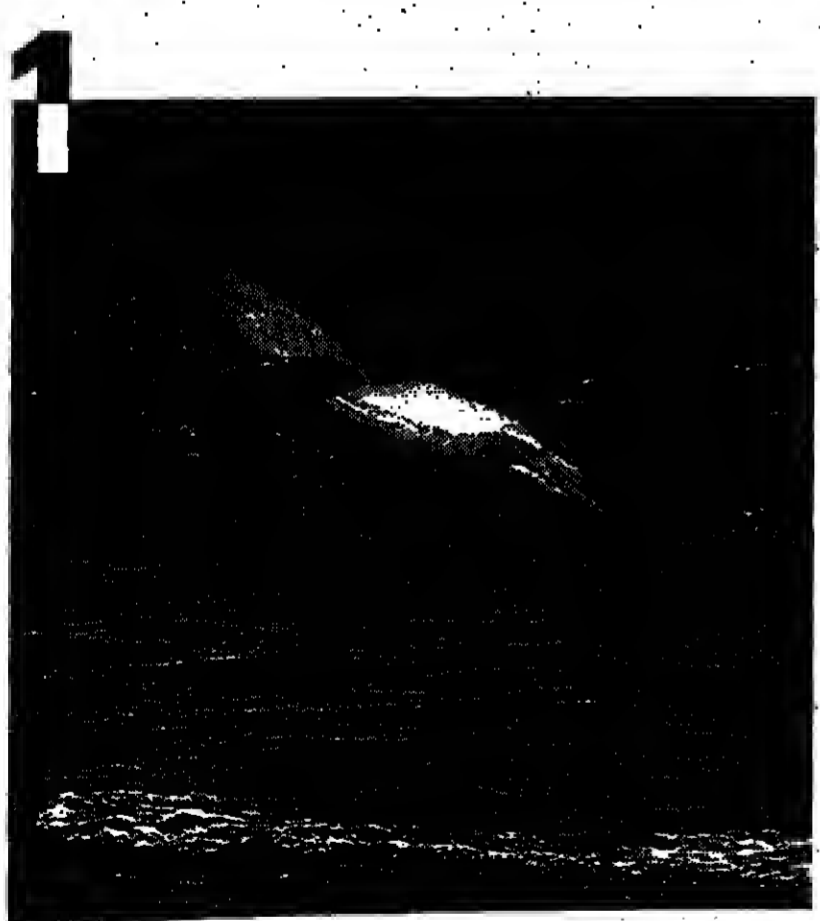
change in its total assets. France realised last year it could no longer use privatisation receipts to cut its Maastricht deficit, because these sales reduced its state assets by the same amount and left its net worth unchanged. By the same token, however, recapitalisation of state companies does not raise the Maastricht deficit because it, notionally at least, increases state assets by the same amount. This latter asset "gain" is traditionally ignored in

French budgets. But if it is included under the Maastricht arithmetic, it lowers the French deficit - by FFr13bn (\$2.63bn), for instance, in 1995. Next year's big windfall, however, comes in the form of the special FFr97.5bn payment by France Télécom to the government to cover future pensions liability for its employees - part of a deal with the unions on the company's partial privatisation. This imposes a new liability on the state, but one

that is difficult to calculate and is not, according to Bercy, calculated in the national accounts of any EU state running similar pay-as-you-go pension schemes. Paris consulted Brussels on the France Télécom payment and the European Commission said this week that "at first sight" it sees no problem. Two other non-budgetary factors have also helped. As in 1995 and this year, the government is again adjusting downwards its debt ser-

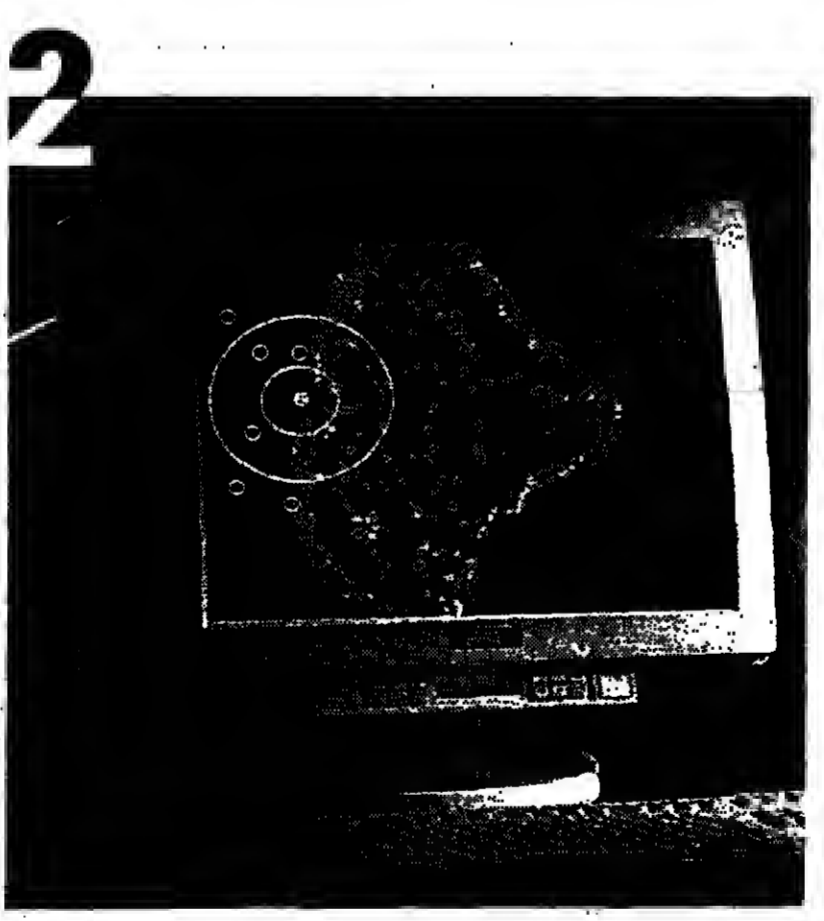
ving, which appeared to be larger than it really was because buyers of bonds in mid-year appeared to be getting a full year's interest when in fact they had paid a higher initial price for their bonds. This year has also seen the special new RDS tax to repay past social security debt. For the moment, this tax is bringing in more - FFr6bn this year and FFr12bn next year - than is being used to repay the debt, and therefore it appears to count as a surplus.

SIEMENS NIXDORF



1 Identify the Threat

Gone are the days when there was a contradiction between ecology and economy. environmental protection is both a competitive factor and a challenge. The need to preserve our ecosystem is something that concerns everyone and that ranges from everyday aspects to global problems, like pollution of the oceans. With leading-edge information systems, it's possible to identify dangers and weakpoints faster - in both the industrial and public sectors.



2 Use Environmental Systems

Networked information systems with a common database help to precisely localize environmental impact and analyse the interrelationships. They give the user a clear view of the entire chain of causes and effects. With the objective of avoiding major risks along the process chain in the use and transportation of hazardous materials as well as in connection with pollutant emissions.



3 Avoid the Threat

Information technology can identify weakpoints and simulate improvements - but the responsibility for doing something about it rests with producers and consumers. The opportunity we have is to control processes through effective environmental management to keep the environment in balance, without impacting corporate profitability. The more private- and public-sector organizations utilize networked environmental protection solutions, the better job we can do of securing our natural ecosystem for everyone.

Siemens Nixdorf: User Centered Computing

F07
Fax: (+49) 911/975-3321, Ref. no. 816 047, <http://www.nixdorf.com>

Peronist leaders try to salvage austerity bill

By David Pilling in Buenos Aires

Leaders of Argentina's governing Peronist party were yesterday desperately trying to ensure parliamentary passage of a tough austerity bill after last week's fiasco when not enough of their own deputies turned up to reach a quorum.

Approval of the bill, on which debate was expected to continue into the early hours of this morning, is seen as a crucial test of

President Carlos Menem's ability to rally his increasingly fractious Peronist party.

Peronist leaders have spent the past days twisting the arms of those deputies who, mindful of next year's mid-term elections, have refused to back an austerity package that aims to raise an additional \$3bn annually in taxes. The original 21-point plan, which set its sights on extra revenue of \$4bn-\$4.5bn, has been savaged by politicians and interest groups,

reducing the package to its bare bones.

President Menem, in an article published in yesterday's Clarin, said he would not hesitate to rule by decree should parliament prove unmanageable. Ironically, it was the opposition Frepaso party which was yesterday hitting that it might attend the debate, thereby providing quorum. All Frepaso deputies were, however, expected to vote against the package.

Eventual passage of the austerity bill is fundamental to the new targets agreed with the International Monetary Fund, with which Argentina this week finalised a revised deal.

According to the letter of intent, which must still be ratified by the IMF's board, the \$3bn from the austerity package will help Argentina reduce its budget deficit next year to \$3bn, or 1 per cent of gross domestic product. If the extra costs involved in cutting the state

bureaucracy and transferring provincial pension schemes to state level are counted, the deficit is allowed to reach \$4.5bn.

The letter of intent also includes the granting of a waiver for Argentina's missed fiscal targets in the first half of this year, which the IMF blamed on sluggish receipts of value-added tax and growing deficits in the social security system.

The Fund has agreed to accept a budget deficit for 1996 of \$5bn

after privatisation receipts, or \$6bn discounting such revenue. The original target had been a balanced budget with an ambitious \$2.5bn coming from privatisations.

Among positive factors highlighted by the Fund, such as healthy reserve and bank-deposit levels, is the improving situation of provincial finances. The overall provincial deficit of \$3bn last year is expected to be reduced to \$1.1bn this year, and to reach a \$300m surplus in 1997.

Canadian car union makes headway

A new labour agreement between Chrysler's Canadian subsidiary and the Canadian Auto Workers union appears to have strengthened the union's hand for forthcoming contract talks with General Motors, writes Bernard Simon in Toronto.

The CAW claimed the deal, reached shortly before a strike deadline on Tuesday night, was an important victory on the contentious issue of contracting work to outside, usually non-unionised, parts suppliers.

Chrysler agreed to replace any jobs lost to "out-sourcing" at its Canadian plants, provided it was making a profit. Out-sourcing is expected to be the thorniest issue in the negotiations.

The first contract with the Big Three North American motor manufacturers traditionally sets a pattern for talks with the other two. However, GM Canada has made less progress than Chrysler in sourcing components from outside suppliers, and is expected to take a tougher line with the union.

GM has given notice that it plans to sell two parts plants employing a total of 5,000 workers, or almost a fifth of its workforce in Canada. Its operations in the US and Canada are closely integrated. The three-year Chrysler deal provides for an annual wage increase of 2 per cent and improved health-care and vacation benefits.

Insider trading ruling leaves hole, says SEC

By Tracy Corrigan in New York

The US Securities and Exchange Commission has asked a federal appeals court to reconsider a ruling which threatens to narrow the definition of insider trading in the US courts.

The ruling rejected the use of "misappropriation theory", a tool which enables courts to convict people who deceitfully use information in violation of trust and confidence, rather than just in breach of strictly defined fiduciary duty. This means, potentially, that an executive dealing on insider information would be guilty of insider trading, but a family member using information obtained from that executive would not.

"This decision leaves a real hole in the ability of the regulators to enforce insider trading rules," said Mr James Morphy, head of mergers and acquisitions at Sullivan & Cromwell, a leading New York law firm. "Eventually the Supreme Court or Congress will have to fill this hole."

The ruling was made in August by the Eighth US Circuit Court, which covers several midwestern states. Since few cases are brought in this area the ruling is unlikely to have an immediate impact on SEC prosecu-

tions, but other circuits could follow this lead.

In the US, insider trading is covered by broad anti-fraud rules, coupled with the "misappropriation" concept, this has so far proved a satisfactory way of prosecuting insider traders, according to Mr Richard Walker, SEC general counsel. But "if other courts followed, we might approach Congress" for legislation defining insider trading more specifically, he said.

The ruling was made in connection with a criminal case against Mr James O'Hagan, a Minneapolis lawyer, accused of improper trading in Pillsbury stock options ahead of the acquisition of the US company by the UK's Grand Metropolitan in 1988.

If the court does not reverse its ruling, it could in theory encourage insider traders to deal within the Eighth Circuit Court's jurisdiction. But in practice, the SEC has considerable leeway in deciding where to bring prosecutions, and an insider would have to gain information on a local company and deal through a local broker on a local exchange to have any chance of taking advantage of the ruling. The more important Second, Seventh and Ninth Circuit Courts have all accepted misappropriation theory.

OBITUARY: SPIRO AGNEW

The vice president who fell from grace

By Nancy Dunne in Washington

Mr Spiro Agnew, the US vice president who resigned in disgrace in 1973, died on Tuesday without ever achieving the modest political rehabilitation gained by his one-time boss, President Richard Nixon.

Mr Nixon left the White House 10 months later under the cloud of the Watergate scandal. His crimes were essentially political - wiretapping, break-ins and lying about them. He ultimately fashioned an elder statesman role for himself and lived to hear praise of both his foreign and domestic policy achievements.

Mr Agnew took pay-offs from businesses for using influence on their behalf. His hastily arranged departure came with a plea bargain - pleading no contest to one count of income tax evasion.

From there he went into an obscure retirement, denying any wrongdoing and insisting that he had resigned from office to spare the nation the agony of a trial.

It was he who was spared a trial. If it were not for the national trauma of Watergate he may have risked becoming the first vice president to endure prison. Instead, he set up as an international trade consultant, wrote a novel and retired to a luxury community near Palm Springs.

Mr Agnew did not go unmentioned. The mayor of the town of Gargalianoi, from which Mr Agnew's family had emigrated, issued a statement calling him "a good man who made us proud."

Mr Agnew's rise was almost as spectacular as his fall. He was elected Republican governor of Maryland, running against a Demo-

cratic racist and garnering the support of blacks and liberals. Mr Nixon selected him as a running mate in 1968 and made him the campaign "attack dog" so that Mr Nixon could look presidential. He became "Nixon's Nixon" - a reference to his boss's role when he was President Dwight Eisenhower's vice president.

He did little but attack throughout his years in the vice presidency, dismissing White House opponents as "nattering nabobs of negativism" and "an effete corps of impudent snobs."

Mr Agnew's critics ridiculed his blunders and ethnic slurs. Democrats tried to use him to get to Mr Nixon. In one commercial he was shown making a speech, but the sound track consisted of only loud laughter and the tag line: "This would be serious if it weren't so funny."



Agnew: Nixon made him the campaign "attack dog"

Copper market co-operation new, hearing told

By Laurie Morse in Washington

The head of the US commodity trading regulator indicated yesterday that, despite evidence of world copper market abnormalities, international regulatory co-operation did not proceed smoothly until after Sumitomo's losses became public in June.

Miss Brookley Born, the chairperson of the Commodity Futures Trading Commission, the chief futures and derivatives regu-

lator in the US, told a congressional hearing yesterday: "Routine information sharing for supervisory purposes is relatively new to the international community, and the production and review of surveillance information by certain markets is uncommon and in early stages of development."

However, Miss Born said that her agency did not need extra powers to supervise market events such as the Sumitomo losses and the subsequent 25 per cent drop in world

copper prices. In fact US bank exposures to Sumitomo corporation's copper trading activities have so far been minimal and copper trading losses appear to be limited to the Sumitomo trading company itself, according to Federal Reserve governor Susan Phillips, who was testifying at a house banking subcommittee hearing on the effect of the Sumitomo affair on US markets and financial institutions.

However, the banking regulator empha-

sised that the review of Sumitomo's copper transactions, which generated \$1.8bn losses for the company, will continue.

Two US banks believed to have helped finance Sumitomo's copper trading activities, JP Morgan and Chase, declined to testify at the public hearing.

Miss Phillips, who is a former chairperson of the CFTC, also said that additional regulation in the US would not have prevented Sumitomo's trading losses.

The venom of a snake helped us formulate a life-saving drug. Hoechst.

In a number of civilizations, snakes have long been revered as a symbol of healing.

It was 90 years ago that scientists developed a better understanding of exactly how snake poisons act in the human body.

Protecting the heart and the cardiovascular system.

An example of research in this field is an active substance used to treat cardiovascular disorders.

The human body contains certain tissue hormones called kinins, which reduce blood pressure and open the blood vessels. Now it has been discovered that the blood-pressure-lowering and vasodilating action of the kinins can be boosted by proteins found in the venom of a Brazilian pit viper.

Scientists at Hoechst Marion Roussel, the pharmaceutical division of Hoechst, have used this discovery to synthetically produce these proteins and thus



Certain proteins found in the venom of a Brazilian pit viper boost the hypotensive effect of kinins.

develop a new life-saving drug. Research into cardiovascular disorders has always played an important role at Hoechst.

In 1904, Hoechst researchers were the first to synthesize the hormone adrenaline.

Other vital developments followed, including edema therapy and preparations to dissolve blood clots.

Today, Hoechst Marion Roussel offers one of the broadest lines of cardiovascular products.

Cardiovascular disease is still the No. 1 cause of death, which is why fighting this important problem is a matter so close to our hearts at Hoechst Marion Roussel.

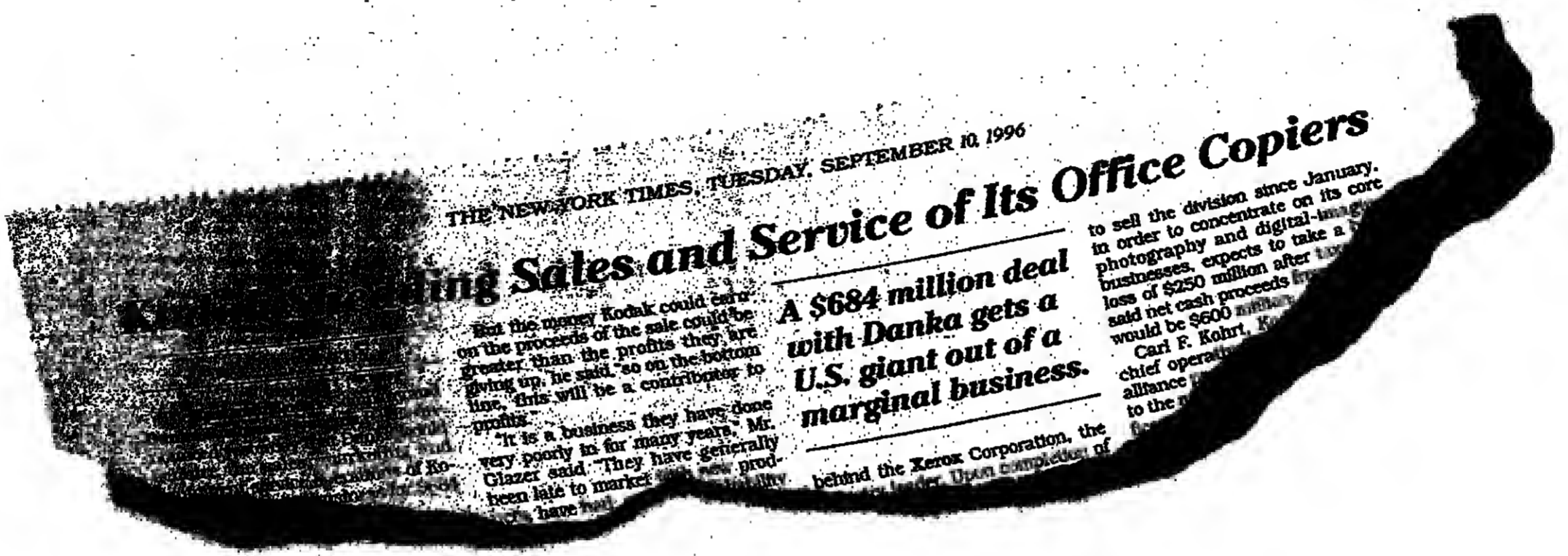
Hoechst
D-65926 Frankfurt am Main
Internet
<http://www.hoechst.com/>



مكتبة الامم المتحدة

enture

POOR
LVS UN



There's never been a better time to give Rank Xerox a call.



Last week, Kodak® announced the sale of their copier business. That's big news. And a big change if you're a Kodak customer. Which makes right now the best time to give Rank Xerox a call. Because no matter how things change, some things stay the same. As a Rank Xerox customer, there are things you can always count on. You can count on our people for the technology, service and support that have made us the industry leader since the day we invented the copier. You can count on a full product line—from traditional copiers and colour copiers to digital document machines. You can count on the flexibility to respond to your needs today. And you can count on our continuing research and development to meet your needs tomorrow. To learn more, call your local Rank Xerox representative. And hear some good news, for a change.

THE DOCUMENT COMPANY
RANK XEROX

Article reprinted with permission from The New York Times. Kodak® is a registered trademark of Eastman Kodak Company. Danka® is a registered trademark of Danka Systems Systems. RANK XEROX® The Document Company® and the stylized X are registered trademarks of RANK XEROX CORPORATION.

ALL THAT GLITTERS: The Fall of Barings

Disastrous myth of Customer X

After the Barings collapse, senior managers believed they had been victims of a conspiracy between Nick Leeson and an outside speculator. In fact, there was no such speculator, and no plot. In today's extract from their book, FT reporters John Gapper and Nicholas Denton reveal how Leeson used his brief success in attracting a big client to cover up his devastating losses

In the New Year of 1994, Leeson paid a visit to the Raffles Hotel in Singapore. He had been invited to meet for the first time one of the high rollers of global trading, Philippe Bonnefoy. Bonnefoy was an archetypal hedge fund trader. In his early thirties, smartly-dressed and quiet, he handled the investment of billions of dollars.

Bonnefoy worked with an Austrian financier called Wolfgang Flottl. They had been together at Kidder Peabody in New York. The two men left when Flottl set up a hedge fund called Ross Capital in 1987. Ross Capital's first use for the \$500m entrusted to it by wealthy private investors was to invest in US takeovers and bond arbitrage.

Bonnefoy, who ran an offshoot of Ross Capital called European Bank and Trust from Nassau in the Bahamas, had come to Singapore to find brokers to take orders on Simex. He was considering betting on a rise in the Nikkei 225 index, the main Japanese share index. Futures and options contracts based on the index were traded on Simex.

On the afternoon of February 3, Bonnefoy sat in his suite at the Raffles, and received half-hour visits from brokers. One was Leeson. Bonnefoy was particularly struck by him. "If I need something, I'll be in touch," Bonnefoy said. On February 16, he put his first trade through Leeson. He bought a few call options, giving him the right to buy futures at a profit if the Japanese market rose.

It was a small order, because Bonnefoy was testing several brokers. It was easy enough for Leeson to get him the best price, since he had Account 88888 to take losses. Shortly after that, Leeson went away on holiday. Before he went, Leeson raised a Barings' options trader called Adrian Brindle in Osaka, to ask him to help if Bonnefoy wanted options while he was away.

Option trading was an arcane science in which Leeson was officially barred from dabbling. The price of options - which give their holder the right but not an obligation to buy an asset at a set price some time in the future - can only be calculated using mathematical models. Leeson was allowed to buy and sell futures for Barings, but was only supposed to broker options for the bank's customers.

In fact, Leeson had sold options for Account 88888, and thus for Barings itself, since September 1992. He had done it to raise millions of pounds to cover the hole in the balance sheet due by mistakes and the subsidies he was giving to customers. The seller of an option receives cash, in return for taking the risk of losing money if the market moves in favour of the option holder.

For about 18 months, Leeson had been selling pairs of options called "straddles". These brought him a lot of premium - the cash handed over initially by the buyer of an option - because they involved more than one option. However, they were doubly risky because a holder of a straddle gained if the market moved up or down. If the Nikkei did not remain steady, Leeson would lose money.

Leeson told Brindle that he had a highly confidential customer called Philippe. Brindle did not catch the second name clearly. It sounded French. The call never came, but Brindle tucked the information away in his head. In mid-March, Bonnefoy started making large orders for Nikkei 225 index call options, based on a market level of 20,000.

Leeson's own selling of straddles was accelerating as the losses in the five eights account escalated. By the spring of 1994, he was ringing the Tokyo office, offering to sell straddles to whoever wanted them. He was desperate to sell, and did not care much about price. He always offered Barings' customers options one or two points cheaper than the price implied by market volatility.

Leeson was still offering very good prices for rolls - combinations of futures bought by traders who had to roll over their positions buyer through Barings in the run-up to the expiry of March 1994 futures hour became Ross Capital. It bought 500 rolls through the Tokyo sales desk, following up with larger orders. In the end, it bought 5,000 rolls for March 1994.

This was about half of the 10,000 rolls that Leeson sold for March. Leeson was still offering the rolls at about ¥10,000 (85¢) cheaper than the standard market price each, although customers including Ross had no means of knowing how he did it. In effect, Leeson handed Ross Capital and others a total of about \$650,000 of Barings' money from the five eights account, without any of them realising.

As this happened, a shift was occurring in how derivatives operations at Barings were managed. Leeson had been sent to Singapore in July 1992 mainly to execute trades at Simex on behalf of Barings' customers. This meant he traded for the futures and options sales desk in Tokyo, run by a 39-year-old American called Mike Killian. Since Leeson ran the Barings Futures back office, he also reported to Simon Jones, the regional operations manager in Singapore.



As Ron Baker urged Barings traders on to greater efforts, Leeson was sitting in the hotel bar drinking Bloody Marys

Leeson laughed amiably. "Listen, you've got to tell me who this customer is," Scott said. "I'm not supposed to say," Leeson replied. He talked obliquely of Philippe. He only met Mr X in hotels, and when he rang his office, the call would be passed through several exchanges.

"You've got to get him to give me a call. It's a must," Scott insisted. "I'll try, but don't hold your breath," Leeson said. Leeson's attempts to cover up the deepening hole in Account 88888 drove him on to manufacture ever greater profits through his switching, and in subsidies to other Barings traders. By November, equity derivatives trading had made an apparent profit of \$40m. In fact, most of this "profit" had in effect been transferred by Leeson straight out of Account 88888.

Yet the financial products group - the derivatives trading division run by Baker - was becoming excited by its apparent success. There was an atmosphere of sheer exhilaration among the derivatives traders - known as "rocket scientists" because of their mathematics backgrounds - at the seam of profits that Leeson appeared to have struck.

Apart from the pleasure of being part of a successful group within Barings, Leeson's talents meant they stood to gain far greater annual bonuses at the year-end. Leeson himself would be rewarded handsomely. Baker was becoming his undisputed boss, since Killian's derivatives sales operation was to be put under Baker's control from the start of 1995. In December 1994, Baker told Leeson that he would be getting a bonus of £350,000, nearly three times the £125,000 he had received in 1994.

The year closed with a week-end meeting organised in New York by Baker for all the 120 staff working for his financial products group. Such "offsites" meetings had been introduced by Baker to bond his disparate group of traders, and urge them on to greater efforts. Leeson was being appointed regional manager of derivatives in Singapore, and was joining a 19-person management committee.

The committee met for dinner on the Friday night. Afterwards, Leeson stayed up drinking with colleagues till 4am, while his wife Lisa slept back at the hotel. He had hardly sobered up by the next morning, and the conference of the New York office, a day of talks and discussion on Baker's trading group.

The staff were seated in the Versailles Terrace of the Sheraton hotel on Seventh Avenue. The session started at 9am with a talk by Peter Norris on Barings' investment banking operations. Norris had reason to be well-satisfied with the year. Thanks to the derivatives profits, it looked as though Barings would virtually match its record profits of the previous year.

By the 10.30am break, Leeson could face no more, and went to the bar. He started drinking Bloody Marys with a fellow trader. He returned to the conference briefly in the afternoon, but was back in the bar by the time of Baker's round-up speech at 5pm. Baker had a message to deliver. They were not there just to enjoy themselves.

Baker wanted a cohesive group that worked together, exchanging information from all corners of the globe. If you listened to customers and traders in each market, and could bridge all the gaps among them, there were big profits to be made. He did not want anybody to sit on their laurels. "Being good is not enough! Everyone must be connected to our strategy, or we will find you, and weed you out!" Baker told the bunched group in front of him. As he spoke, he reached out with his hand, imitating the action of digging out a weed. "Information arbitrage is our business," he went on. "It's Messianic times. If you don't know what an information curve is, then find out! Position yourself in an information curve! Dominate the curve!"

Leeson carried on drinking. At the moment Baker was describing a future for Barings based in part on the apparent triumphs in Singapore, Leeson was no longer able to talk coherently about how he had achieved his success. He did not sober up enough to attend the final dinner, held on a balcony above the main concourse at Grand Central Station in midtown Manhattan. At the dinner, Baker was in his element, although he was unhappy that Leeson was not there. Leeson seemed to have exploited a gap in the market best of all the traders. But Baker had not grasped the truth. The information curve Leeson dominated was not in the financial markets. It was inside Barings. For two years, Leeson had existed between Tokyo and Singapore, between front and back office, between trader and salesman. Now he had brought them all to the point of collapse.

TOMORROW: Failing to realise the truth

All That Glitters is published in the UK by Hamish Hamilton, £20. It can be ordered from FT Bookshop: Freecall 0500 418 419 or +44 181 324 5511 from outside the UK (free p&p in UK)

He had set out as just another order filler, but within two years he had bought himself enormous power, using Barings' money. His profits might be largely fabricated, but they looked extremely good to the outside world. Leeson had taken to guzzling lots of chocolates on the trading floor during the day, presents from local traders anxious to gain favour. He was now much fatter, and the other traders used to call him Fat Boy. He had started out shyly, but now he swaggered on to the trading

floor, threatening to cut out any local traders who displeased him. If anybody incurred his wrath, Leeson would buy a cream puff cake from the Delifrance cafe downstairs, and slip it into the miscreant's face. Outside the exchange, Leeson mostly lived quietly - though he had a coarser streak, which was to get him into trouble. One night he went for a drink with a sales representative called Aloysius Chiuze, employed by Reuters. They were getting drunk in a bar, when they saw some women looking through the door, and decided to shock them by turning round, bending over, and baring their bottoms.

Leeson was arrested, charged and fined 200 Singapore dollars. When Norris heard of it through Baker, he felt he had to tell the executive committee of Barings, chaired by Peter Baring. It was the first time Leeson had come to the committee's attention. "It is slightly embarrassing, but one of our traders got drunk the other night, and pulled a moon," said Norris. There was a startled silence.

"What did you say?" Peter Baring finally inquired. "Others in the room started laughing. Then Norris admitted that it was serious, because Leeson had been charged and fined. "Well, maybe we should sack him. What does he do?" said John Bolsover, chief executive of Barings Asset Management.

Norris said that sacking him would be awkward, because he contributed a lot to profits in Singapore. Bolsover was not satisfied. "Whoever he is, he is an ambassador for Barings, and if he did that in Singapore, how bright can he be?" he said. The discussion petered out with no decision being taken on the errant trader. Leeson had survived scrutiny at the hands of Peter Baring.

By the autumn, Leeson was again facing problems in five eights. The Japanese market was once again veering downwards after a rally in June, when it reached 21,500. Leeson had sold ¥8.1bn (822m) of straddles at the peak of the market, which were losing money rapidly as the index fell below 20,000.

His straddles now stretched for a year into the future. For him to keep the option premium, the Nikkei had to be incredibly stable. What was known as Nikkei volatility - the width of the band within which the Nikkei traded - had to remain below 10 per cent for a whole year. Any analyst of modern Japan would have known that was absurd. Japan had the developed world's most volatile stock market.

The Nikkei options market was starting to buzz with rumours about what Barings Futures was doing. It was never completely possible to tell whether a broker like Barings was dealing for a customer or itself, but in this case it seemed plain that it had to be a customer. Barings would never take such a risk. This view suited Leeson, who kept encouraging rumours about his mysterious "customer".

Tokyo traders had by now dubbed Leeson's mystery buyer Customer X. Anybody with an option pricing model, or a bit of common sense, could see Customer X must fail. Apart from anything else, Customer X was attempting to corner volatility in the wrong direction. It was just not possible for volatility to fall to zero, with the index closing day after day at the same level.

Yet however compelling the logic, investment banks could not find many takers for this view as November wore on. JP Morgan failed to entice any big customers with a research note arguing that they should buy options that constituted a bet on high volatility. As Leeson sold more and more straddles, Nikkei volatility fell below 10 per cent and kept falling. Leeson's accidental squeeze was starting to hurt.

Other traders were now desperate to discover who Customer X was. Gueler was taken out to lunch by a rival trader who tried to find out. "I could tell you, but I would have to kill you afterwards," Gueler joked. Giles Scott, one of Barings' derivatives salesmen in Hong Kong, was not put off easily. Scott, who affected a mid-Atlantic drawl although British-born, reasoned that Customer X might also want to buy derivatives based on the Hang Seng index in Hong Kong.

Scott rang Leeson to sound him out. "Is that Big Balls Nick?" Scott inquired. "Some of my clients have been commenting on the size of your gonads."

"Information arbitrage is our business. If you don't know what an information curve is, then find out! Position yourself in an information curve! Dominate the curve!"

Ron Baker



with an equal and opposite long in Osaka. The customer gained the lower costs of Simex, while Barings gained from the better price on Osaka. It would pass on some of the price improvement to the customer, for which it was now being rewarded with a special commission. It could keep the rest itself. This explanation was largely nonsense. Yet Baker was convinced. This was partly because Leeson was an exceptionally fluent liar. He had spent nearly two years fooling people, and his partner had improved with practice. Another thing in his favour was that Baker had little experience of managing derivatives traded on exchanges. Leeson had found a good environment in which to commit a fraud.

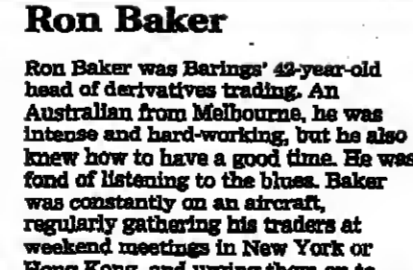
Baring Futures was now the dominant broker on Simex, and Leeson was king of the exchange. floor, threatening to cut out any local traders who displeased him. If anybody incurred his wrath, Leeson would buy a cream puff cake from the Delifrance cafe downstairs, and slip it into the miscreant's face. Outside the exchange, Leeson mostly lived quietly - though he had a coarser streak, which was to get him into trouble. One night he went for a drink with a sales representative called Aloysius Chiuze, employed by Reuters. They were getting drunk in a bar, when they saw some women looking through the door, and decided to shock them by turning round, bending over, and baring their bottoms.

KEY FIGURES IN NICK LEESON'S WORLD



Peter Baring

Peter Baring, the 59-year-old chairman, joined Barings in 1958. A member of the founding family, he was aloof, quietly-spoken and deliberate; his stony features lit up only occasionally with a smile. He travelled to work by Underground from his home in Notting Hill, west London. He was almost teetotal, and very fit. His biggest extravagance was skiing on powder snow. His air of remoteness stemmed more from shyness than arrogance. Sometimes he even gave the impression of being a little embarrassed to be chairman. Many in the City regarded Andrew Tuckey, his deputy, as the force behind Barings.



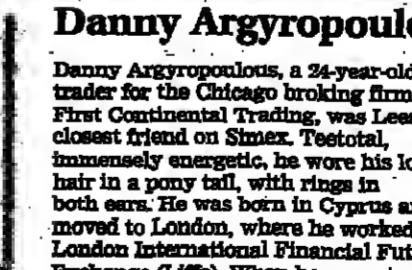
Ron Baker

Ron Baker was Barings' 49-year-old head of derivatives trading. An Australian from Melbourne, he was intense and hard-working, but he also knew how to have a good time. He was fond of listening to the blues. Baker was constantly on an aircraft, regularly gathering his traders at weekend meetings in New York or Hong Kong, and urging them on to greater efforts. Baker had a first class economics degree, and a graduate diploma in accounting. He had worked in the eurobond market first for Bank of America, and then Bankers Trust. He left to set up a bond and derivatives trading operation at Barings.



Peter Norris

Peter Norris was the 39-year-old chief executive of investment banking at Barings. The son of an Army major, he had attended Charterhouse, the public school in Surrey and joined Barings from Magdalen College, Oxford in 1974. Intelligent and self-assured, he was impatient with some of the older managers who reported to him. Norris was good-looking, with wavy hair and athletic. He played rugby, tennis and Five-a-side, a game played at British public schools. It was similar to squash, but instead of using rackets, players hit the ball with their gloved hands. Norris was so good that he went on to play for Oxford against Cambridge.



Danny Argyropoulos

Danny Argyropoulos, a 24-year-old trader for the Chicago broking firm First Continental Trading, was Leeson's closest friend on Simex. Teetotal, immensely energetic, he wore his long hair in a pony tail, with rings in both ears. He was born in Cyprus and moved to London, where he worked on the London International Financial Futures Exchange (Liffe). When he came to Simex, he and Leeson were almost the only British traders there. Their friendship caused jealousy among other brokers as Leeson came to dominate the exchange. The two men's trading links were later questioned by Singapore inspectors, but he was cleared by the authorities.

مركز الاموال

COMMENT & ANALYSIS



Peter Martin

The end of a golden era

A growing reluctance among companies to run pension schemes for their employees symbolises the gradual weakening in their long-term relationship

A profound change is taking place in the relationship between companies and the people who work for them. Corporate rhetoric obscures the change. Bosses still parrot phrases such as "people are our most important asset". The widespread sackings of the recession are portrayed as one-off blood-lettings, essential to preserve the jobs of the workers who remain.

Individual seeking to contract independently to cover such risks with insurance companies or other long-term savings institutions must pay a substantial price. Yet companies have been willing to take on the role of paymaster of last resort for their pension schemes, receiving no fee for the task. Acting as a pension fund's Deep Pocket has benefits for the company and its shareholders that go well beyond the tax advantages involved. In particular, it has allowed UK pension funds to make a huge bet on equities.

Shares offer consistently higher long-term returns than assets such as bonds or cash, at the price of potentially greater volatility. An individual saving for the long term would have to bear that volatility in mind: what if retirement coincided with a period of low equity values?

In a defined-benefit pension fund, this risk is borne by the sponsoring company. Because it promises to top up the fund if needed, the scheme's managers can ignore the risks attached to equities as a class. The higher returns derived from equities greatly reduce the

long-term cost to the company of providing pensions: indeed British business as a whole has made little or no net contribution to pension funds in recent years. Still, a company is not a co-operative or a charitable institution. The risks for shareholders inherent in this approach have been absorbed in the past by a number of characteristics of the British pension system.

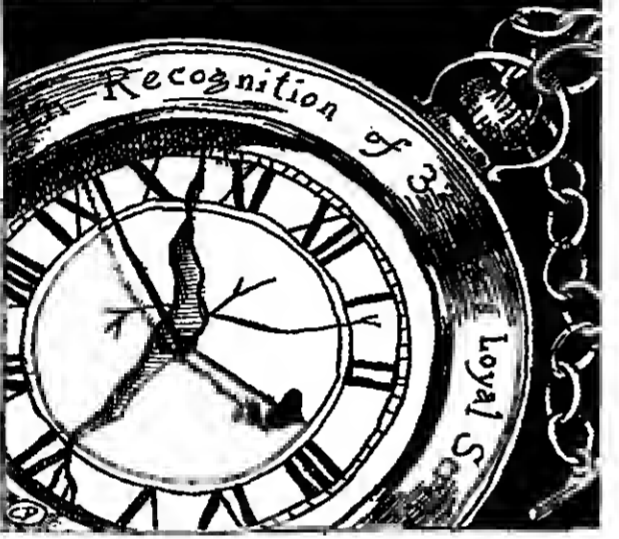
Early leavers - whether voluntary or involuntary - traditionally received poor treatment compared to those who stayed to retirement. Arguably, it is they who have borne the true burden of the pension guarantee. Pensioners retiring at times of sharply rising prices also risked a fall in the real value of their incomes, since companies often increased pensions by less than the rate of inflation.

Both these injustices have been corrected by amendments to pension law and a falling rate of inflation. But this has removed the safety valve which made companies bappy to guarantee defined-benefit pensions. The introduction of an obligatory "Minimum Funding Requirement" as an

annual check on the solvency of pension schemes has raised the stakes further: it is likely to raise the long-run cost of pensions by pushing many funds away from equities and towards bonds.

The corporate reaction has been instructive. Companies are increasingly unhappy to assume the risks they once freely chose to accept; some are washing their hands of the pensions business altogether. A growing number has replaced defined-benefit plans with "defined-contribution" schemes: employees receive a pension that reflects the return on the contributions made on their behalf, with no link to final salary. Others have gone further, merely offering to contribute to employees' personal pensions.

These relatively arcane changes have revealed the inherent tension between the company as a vehicle for its shareholders, and the company as a social entity. Recession has in any case weakened the social role of the company: if it cannot offer employment stability, it becomes progressively a more fragile community. Yet the pensions issue goes to the heart of the company's identity in a way that even job instability does not.



MEMOS FROM THE CHAIRMAN: By Alan C. Greenberg Workman, \$14.95, 156pp

Despatches from the king of paper clips

Long, pompous, irrelevant office memo is an uninspiring document. The idea that someone should have saved up their own memos over 18 years and turned them into a book to "benefit everyone in business from Fortune 500 chief executives to entrepreneur" is a curious one.

Yet these are not just any old memos and Alan "Ace" Greenberg, the head of Bear Stearns since 1976, is not any old chairman. His picture on the dust-jacket shows a bald man playing with a yo-yo - making clear that Ace is one hell of a guy. In the preface his great friend Warren Buffett assures us that "Ace Greenberg does almost everything better than I do - bridge, magic tricks, dog training, arbitrage - all the important things in life".

Management guru Tom Peters is still more breathless: "I love this book. If I didn't have a dreaded MBA I might even, at age 53, apply for a job at Bear Stearns," he says on the back cover. Not all readers will feel like applying to the Wall Street securities house on the strength of the book, however. Alan Greenberg is certainly an ace at writing short, punchy memos, but he does not come over as every-one's idea of the ideal boss.

The typical memo gets off to a thundering, provocative start: "We are having a problem getting a point across" or "Stop it now!". He proceeds to issue new rules about answering the telephone promptly and politely, turning lights off and looking clean and tidy.

Often he winds up with a threat: "From this date forward any person who violates this simple rule will receive a very quick simple fine. Enough is enough - we have tried being Mr Nice Guy - it has not worked." As if his own personality

were not enough to keep his staff to the straight and (very) narrow, he has invented an imaginary consultant called Haimchinkel Malintz Anaynikal to help him. Haim, a tightwad reactionary, believes the following: 1. Hire PSDs ("poor, smart and a deep desire to become rich"). 2. Make decisions on common sense and avoid the herd. 3. Control expenses. 4. Beware of catchy phrases. 5. Stay humble humble humble.

LETTERS TO THE EDITOR

Number One... We are pleased to receive your letters... Your comments are most appreciated... Letters may be available for letters without... in any language.

The Financial Times plans to publish a survey on The FT500 Survey on Friday, January 24 1997.

For businesses throughout Europe, the publication each year of the FT500 has become an important annual event. Now in its 15th year, and published as a 48 page special survey within the FT, the FT500 uses market capitalisation, the one internationally-comparable yardstick, to measure and analyse the performance of companies on Europe's stock exchanges.

What investors need to be told

From Mr Alex McClarty. Sir, Referring to Barry Riley's "When Scandinavia gets too hot for comfort" (September 11), I am pleased to see that some realise the difficulties facing the private investor, namely gauging the liquidity (and therefore the riskiness) of unit trust investments. The fact is, that for 90 per cent of investors, such information is just not available. If one tries to get it or asks for more up-to-date information than an outdated managers' report, the reply is often: "That is sensitive information and cannot be provided."

Threat was ignored

From Mr Andrew Warren. Sir, It is a simple oversight or willful tunnel vision that permits you - for the second year running - to publish a six-page supplement "Power in Asia" (September 16), without once making a single acknowledgement of the threat of climate change? It is not as if the governments upon whose electricity industry you report are non-contributors to the international forums, set up to try to deal with what is now acknowledged to be the world's most pressing environmental problem.

No such market for top executives

From Mr Peter M. Oppenheimer. Sir, One gets tired of hearing bodies such as the Institute of Directors justifying, or explaining, top executive salaries in the UK by reference to a supposed international market for the executives in question ("Top directors' packages rise by more than 12 per cent" September 17). There is no such market. Leading executive positions in the larger companies are filled overwhelmingly by nationals

Deflated

From Ms Antonia Giulio Carzaniga. Sir, I was surprised to read "Italian inflation tumbles" (September 6) that over the month of July, for the first time since 1968, a negative growth in inflation had been recorded in Italy. I suppose your report wanted to say that, for the first time since 1968, deflation (i.e. negative inflation), or, alternatively, a negative growth in prices, had been recorded.

Too simple an argument over France

From Mr Charles Wilson. Sir, Mr Robert Rainford (Letters, September 17), in his desire to remove confusion on the Emu debate, seems to be going too far in his desire for simplicity. He equates two facts: France has unacceptably high unemployment; France is trying to respect the criteria for Emu. If France were to drop its fight for Maastricht, the argument seems to be: we would be as happy as you all are over the Channel.

مكتبة الامير

COMMENT & ANALYSIS

FINANCIAL TIMES

Number One Southwark Bridge, London SE1 9HL
Tel: +44 171-873 3000 Telex: 922186 Fax: +44 171-407 5700

Thursday September 19 1996

A slice of French fudge

The French government has long needed a miracle to allow it to meet both its Maastricht promises and the ones it has made to the French electorate. Either that, or some very fancy budget footwork. Yesterday's 1997 budget was a deft example of the latter.

With no miracle in sight, the government has probably done as much as could have been expected in juggling the conflicting demands of its European partners, a stagnant economy and a disgruntled electorate. But the creative accounting it has taken to do it will not fool anyone.

On paper, next year's overall public deficit will be 3 per cent in line with the Maastricht criteria - but the real progress in slimming the gap between central government revenue and spending looks set to be very modest. Spending will be frozen in real terms - for the first time, it must be said, in the history of the Fifth Republic. But taxes have also been trimmed in an effort to get the economy moving again. The end result, before the use of fancy financial footwork, is a central government deficit only FF4.8bn less than this year.

A few months ago Mr Jean Arthuis, the French finance minister, was keen to persuade the markets and his European colleagues that France would abide by the spirit of Maastricht

in its efforts to knock the budget deficit down to 3 per cent. Come the fateful day, there might have to be a fudge or two around the edges - but France must be seen to be trying.

The even slower than expected pace of the economy this year has made more drastic action very difficult, to be sure. Even with relatively optimistic assumptions, next year's budget deficit is now expected to be 3 1/2 per cent of GDP. And it is now formally predicted that this figure will be massaged downward with France Telecom's special payment and other one-off transfers. This does not look like a bold effort.

One area where the government might have been bolder is in shrinking the size of the civil service. It has been able to promise a total reduction in jobs of only 5,000, out of 2.2m in the public sector. That is feeble. Social security spending is more difficult to cut quickly, but even there a continuing deficit of FF30bn is disappointing.

But the real problem is that Mr Arthuis has been forced to use his fudge so soon, which must restrict his room for manoeuvre next year if his assumptions prove too optimistic. He has sought to demonstrate his absolute determination to meet the Maastricht targets. But the exercise remains less than wholly convincing because of the jiggery-pokery.

Tangled yarn

For more than a decade, Europe's textiles and clothing sector has been caught in a spiral of decline to which there is still no end in sight. All the signs point to further heavy job losses, factory closures and restructuring. But instead of encouraging the industry to try to regain competitiveness, the European Union is planning action which seems destined to make its problems worse.

EU governments are poised to approve provisional anti-dumping duties of up to 30 per cent on imports of unbleached cotton fabric from several, mostly Asian, countries. The planned penalties result from a European Commission dumping investigation, launched after persistent lobbying led by French and Italian cotton weavers, which claim the imports are sold at unfairly low prices.

Unbleached cotton fabric is a raw material used in the manufacture of many types of textiles and clothing. EU production of the fabric has dwindled steadily and today meets barely a quarter of total demand. Dumping duties on imports amount to taxes on an essential input for European users. The predictable consequence will be to handicap internationally competitive textile and clothing manufacturers and encourage them to shift more production, and jobs, to cheaper locations abroad.

This perverse exercise in

industrial policy also sends disturbing signals about EU trade policy. The Uruguay Round requires the EU to dismantle by early next century the quotas which have long ringed its textiles and clothing markets. But its progress towards that goal has so far been minimal. Under pressure from European producers, Brussels is insisting it will speed up the timetable only if developing countries agree first to liberalise their markets.

These are flatly resisting any such deal, arguing that the EU is demanding concessions from them as the price for fulfilling its obligations under international trade rules.

Intentionally or not, brandishing the dumping weapon looks like an attempt by the EU to apply coercion to trade partners after persuasion has failed. It raises doubts about the sincerity of the EU's commitment to removing quotas. It also arouses suspicions that any liberalisation thus achieved will be negated by the erection of new types of barrier.

The failure of years of protection to halt the contraction of the European textiles industry gives no reason to believe that more of the same will do any good. By continuing to shelter its producers, the EU is encouraging them to delay inevitable adjustments. As a result, eventual change will be still more painful than it need be.

Major's morals

When politicians talk about morality, it is time to head for the door. They are usually trying to sell something which is difficult to deliver.

Last night Mr John Major, the UK prime minister, stretched the language of ethics far beyond its limit by applying it to the ratio of public spending to gross domestic product.

Conservatives, Mr Major said, believed that reducing the role and size of government was not just a policy option, but a moral imperative. It was not moral, he said, to take too much tax from people for government to spend, and diminish individual choices.

The Tory faithful will chant a fervent "Amen". They will be delighted, no doubt, that their leader can show that Mr Tony Blair, the Labour leader, is not the only preacher in town.

The two contenders are trying to differentiate themselves by playing upon contradictory aspirations. Mr Blair would like Britain to be a more decent society, looking after the old and infirm, and educating children better. He knows the public wants this, but is unwilling to pay the price in higher taxes. Mr Major emphasises individual choice (through tax cuts). But he knows that any serious move in this direction would require unpopular cuts in spending programmes, such as health and welfare.

In all advanced economies, voters tend to demand the goods and renege on the price.

Governments connive by going into debt. So righteousness, if it exists in this context, consists in being honest about how the books can be balanced.

In the UK, as the Tories well know, the government's share of the economy has stayed obstinately close to 40 per cent for the past two decades. Despite all the Conservatives' efforts, it is slightly above what it was when they came to power in 1979. This is partly because the rise in unemployment has offset the effects of other reductions in the public sector.

However, at 43 per cent, the size of the UK's public sector relative to its economy is close to the average for all developed countries, significantly lower than the average for all EU countries (50 per cent) and not as different from Japan (37 per cent) as many people imagine.

This suggests that, although there is room for debate about the balance between the tax burden and state services, that achieved in Britain in recent decades is fairly close to what the public wants (and will tolerate) in much of the developed world.

Mr Major never tires of denouncing New Labour for the sin of offering benefits while suppressing the cost. If he wants to achieve superior righteousness he should now tell the public that lower taxes depend on cuts in services or benefits - and which ones. This is a new danger for both parties.

Smooth take-off for shake-up

British Airways is tackling its labour costs before it is forced to do so by competitive pressures, says Michael Skapinker

When a company changes in less than a decade from being a slothful state enterprise to being one of the few UK groups regarded by international competitors as a role model, what does it do for an encore?

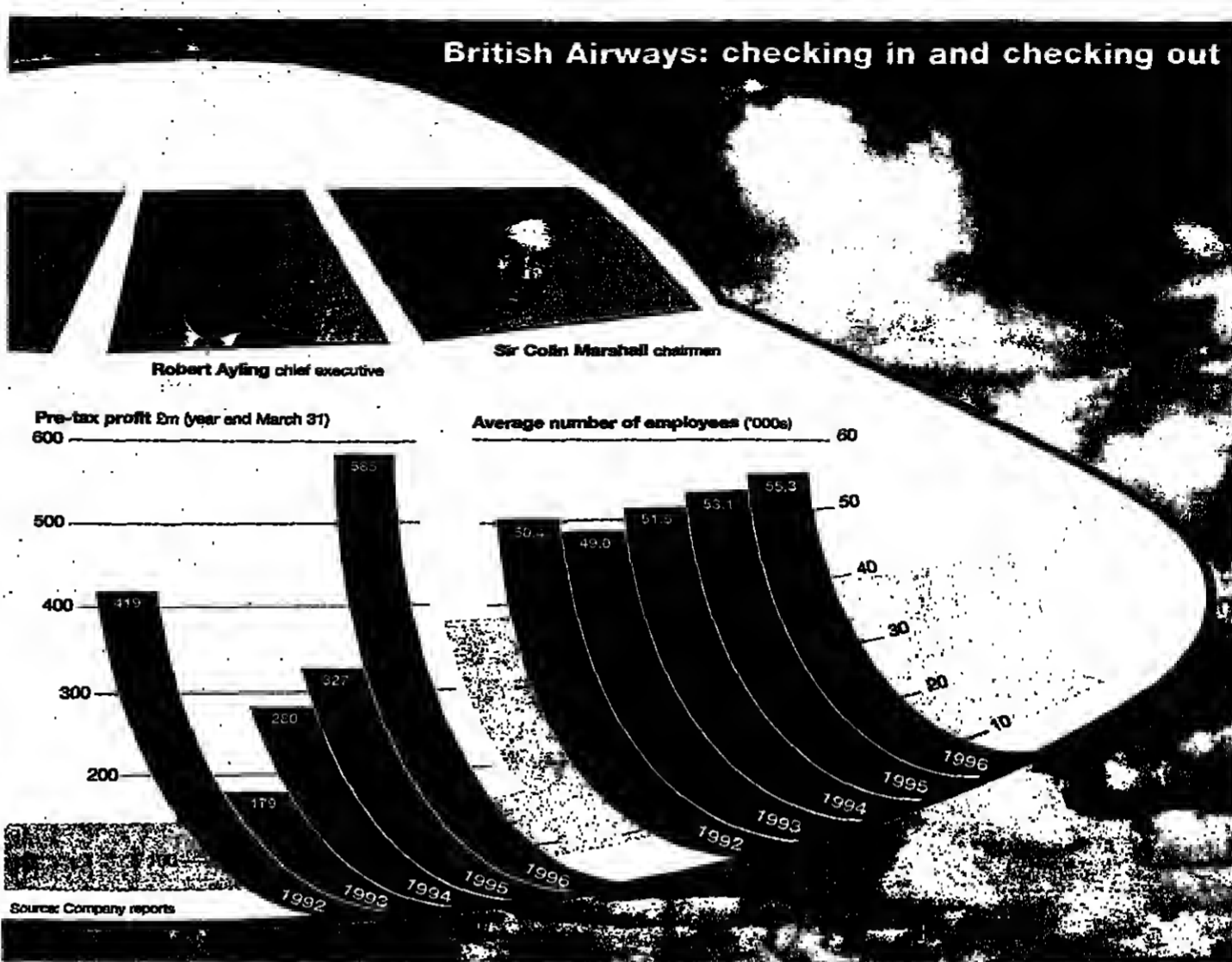
This was the question facing Mr Robert Ayling when he took over as chief executive of British Airways at the beginning of the year.

At first sight, he did not have to do much. The company's pre-tax profits last year of £586m were the highest of any airline in the world. In this week's FT and Price Waterhouse survey of Europe's most respected companies, BA was placed second after ABB, the Swedish-Swiss engineering group. It was the only airline in the top 20, apart from Swissair which came 16th.

For Mr Ayling to have continued to run BA in the way it has been since it was privatised in 1987, however, would have been to ignore changes in the airline industry which threaten the profits of even the most successful carriers. Without radical change, according to Mr Ayling, BA's profits would have evaporated by the end of the decade.

Yesterday he announced that 5,000 of BA's 55,300 employees would be offered voluntary redundancy. They will be replaced, however, by a similar number of more highly skilled, more flexible employees, who will be recruited over the next three years.

Managers in several areas of BA's business, such as baggage handling and ticket processing, have been told they must ensure they can do the job as cheaply as outside suppliers. If not, their activities will be contracted out.



terms, Mr Robert Crandall, chairman of American Airlines, said this week of the aviation industry: "It's one of the most miserable businesses in the world."

Add up carriers' financial results since the start of commercial flight, he said, and you will find that the world's airlines have made a cumulative loss.

And Mr Jürgen Weber, chairman of Lufthansa of Germany, warned employees earlier this month that their airline would go bankrupt without a cut in employment costs.

"What we really need is a negative pay increase," he told them. "How could it be otherwise, since we get less and less money for our tickets? If we don't want to make losses again, we have to do something about our personnel costs - otherwise I can calculate right now when we'll go bust."

Central to the problem is the long-term fall in air fares. Airline yields - the amount received for each mile they carry a passenger - are falling by 1 per cent a year, according to Boeing of the US, the world's biggest aircraft manufacturer.

The reasons for the fall include the greater competition induced by liberalisation of air travel in the US in the 1980s, which is being followed by increased deregulation in Europe. Low-cost carriers, which offer little on-board food or entertainment, are entering the market, undercutting the fares of large airlines.

Long-haul travel - from Europe to Asia, for example - is growing more quickly than short-haul. This depresses fares as airlines can charge more per mile for short flights than for longer ones. And leisure travel is grow-

ing faster than business travel. Holidaymakers are not prepared to pay as much for their tickets as business travellers.

The most obvious area for airlines to tackle if they want to win an advantage over competitors is labour costs, says Mr Rigas Doganis, professor of air transport at Cranfield University in the UK.

"Airlines fly broadly similar aircraft, they pay similar prices for fuel, the same prices for landing, overflight and computer reservation systems. The only variable they can influence is labour costs," he says. Staffing costs typically account for between 25 per cent and 35 per cent of operating costs.

Prof Doganis, who served as chairman of Olympic Airways for 14 months before being dismissed earlier this year by the Greek government, says airlines can cut labour costs without substantially changing the way they do business.

"You can freeze wages, reduce staff numbers and change working conditions such as the number of hours pilots can fly and how many rest days they have," he says. "But once you've exhausted what you can do with your own staff, you can go further and start contracting out, seeing if anyone else can do it more cheaply."

Contracting out airline activities is a well-established feature of the industry. It is common for carriers to pay outside caterers to feed their passengers. Many airlines rely on other carriers or specialised companies to handle their baggage, check in their pas-

sengers at foreign airports and service their aircraft. And Singapore Airlines has some of its accounting work done in China.

BA has been an enthusiastic practitioner of one of the most radical forms of contracting out: getting other airlines to fly under its name. The company has nine franchisees, independent airlines with aircraft painted in BA colours and staff wearing BA uniforms.

Most of the airlines BA has franchised to fly in its colours are British: last month the company reached agreement with British Mediterranean Airways, a UK-based carrier, to fly in BA colours to Beirut, Amman and Damascus in the Middle East. But there is also a Danish franchisee and one in South Africa.

These franchise arrangements produced £50m in revenues for BA last year. Mr Ayling said yesterday he wanted to see this figure doubled.

In other areas of contracting out, he is proceeding cautiously, allowing in-house staff to try to get their costs down to the level at which an outsider contractor could do the job. Mr Ayling says that a year ago BA reached agreement with the unions representing the ramp workers who refuel aircraft and load baggage that they would reduce their costs to the point where they were competitive with outside suppliers.

Another department which has been placed under pressure is passenger revenue accounting, which is responsible for processing tickets after passengers have boarded the aircraft. Mr Ayling says BA is unusual in doing this work in its home country.

American's ticket processing is done in the Caribbean. Swissair's is done in India. "You might say BA has been a bit slow here," says Mr Ayling.

BA already employs a group of graduates in Delhi to correct computer errors which appear on its booking system. It has also set up an operation in Bombay to do some ticketing work and they could eventually take over the rest of it. Some of BA's computing programming will be put out to contract rather than done in-house.

Mr Ayling says the airline would not seek to cut costs to market levels in all cases. BA cabin crew had to have a higher level of expertise in foreign languages, for example, than flight attendants working for charter airlines. The company would have to accept that it had to pay more for certain highly skilled staff.

All of this adds up to a much less threatening package than some staff had feared. This is probably because the airline is taking action well before it needs to. Unlike companies which cut costs when financial disaster strikes, BA has decided to begin the process when its aircraft are full and it is making record profits. This means it has time to consider how best to cut costs.

"It's good management to take action when you are performing well," Mr Ayling says. "If we as managers can foresee that we can't carry on as we are, we should start doing something about it now and not in three years time."

BA had in the past been criticised for being short-term in its outlook, says Mr Ayling. It is not a mistake he plans to repeat.

OBSERVER

Possibly the finest

It is not surprising that the finest of Swedish products are those which are not made in Sweden. As a result, the country's reputation for quality is not as high as it once was. In fact, the country's reputation for quality is not as high as it once was. In fact, the country's reputation for quality is not as high as it once was.

Squeeze the pore

To wrunch an old adage - when Japan gets nose cleaners, the rest of the world starts inspecting its pores. Having tried Chinese seaweed to cut their calories, Japanese women are now nursing their noses with new peel-off "cosmetic pads", the country's latest beauty fad.

Costly peanuts

Want to party with Arnold Schwarzenegger? Perhaps something a little more constructive. Like helping former President Jimmy Carter and wife Rosalynn build a home for a low-income family high up in the Appalachians.

Tell me another

Good to find a machine with manners. In the US recently Observer tried using an internationally-recognised credit card to get some cash from an ATM. Shove in the card, tap the PIN number, and hey presto! Out comes... nothing but the following message: "Hi! We haven't heard from you for a while. So just for your own protection we are not proceeding with this transaction. Please consult your bank."

100 years ago

The Secret of Civilisation At the Liverpool meeting of the British Association last night, Dr. William Newton read a short paper on "Nitrate", in which the nature of the fertiliser and the methods of its extraction were described. The particulars given were more or less elementary and familiar, but there is one sentence which really must be quoted as throwing an entirely new light on the subject: "The knowledge of the utilisation of nitrate in the manufacture of explosives is the power behind civilisation which is for ever a guarantee that civilised States shall never again go down before a horde of barbarians, as did the Roman Empire under the Goths and Huns." It is rather startling to discover that our boasted civilisation is based upon nitrate of soda.

50 years ago

Franco-Argentinian Pact Good news in the international field has a scarcity value nowadays. For that reason 17th September, 1946, deserves long to be remembered as the date of two welcome events: the conclusion of financial and trade agreements with the Argentine and France. Both are characterised by the same spirit of give-and-take after prolonged hard bargaining.

Welcome to the heart of London. Radisson EDWARDIAN

FINANCIAL TIMES

Thursday September 19 1996

Hunterskil Howard Business Services WOLSELEY

Beef crisis may lead EU to breach export limits

By Caroline Southey in Brussels

The European Union risks breaching internationally agreed beef export limits because of falling European demand sparked six months ago by fears over BSE, or mad cow disease.

because of fears over BSE (bovine spongiform encephalopathy). The EU's ability to contain over-production could be further undermined if Britain decides today to abandon a pledge for a wholesale cull of 125,000 cattle as part of its anti-BSE strategy.

forum for world trade negotiations before the setting up of the World Trade Organisation. It limits EU exports of beef to 1.7m tonnes in 1996-97.

Manila warned to resist curbs on mining

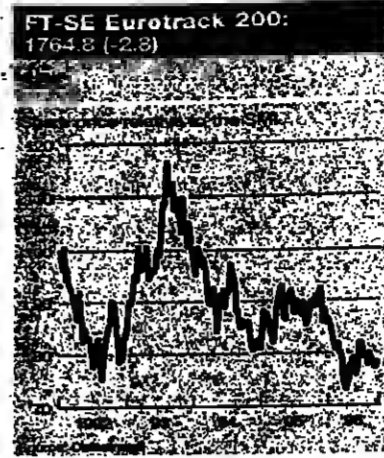
By Edward Luce in Manila

Twenty of the world's leading mining companies have told the Philippine government to resist pressure from domestic environmental groups to rewrite the country's mining investment code.

Overhauling Olivetti

THE LEX COLUMN

The board games at Olivetti continue. But investors, who must be wondering which set of rules the Italian electronics group is playing by, are no wiser than before.



The position of Mr Francesco Calo, the chief executive, had become untenable, since he is under investigation about the group's allegedly misleading half-year results.

Nor has pressure from Consob, the Italian market regulator, shed much more light on Olivetti's state of health. The group says it is unable to give an update on its debt levels and unwilling to discuss potential alliances or disposals.

The Philippines is estimated to have the seventh largest gold reserves and 10th largest copper reserves in the world.

Manila opened the country's moribund mining sector to 100 per cent foreign ownership 12 months ago. But it has frozen all but two of the 70 foreign applications for exploration permits while it reviews the environmental impact of liberalisation.

The government decided to alter the mining code following public outrage this year after Marcooper, a local company 40 per cent owned by Placer Dome of Canada, leaked toxic "tailings" into the Boac river south of Manila.

Placer Dome, one of Canada's biggest mining companies, has since withdrawn from Marcooper.

Two foreign mining executives who were with Marcooper at the time have been charged with violating five separate environmental laws. If convicted they could face a jail term.

The case prompted widespread domestic debate on whether majority foreign ownership of mining companies should be permitted.

"The positive momentum generated [by the mining liberalisation a year ago] has been stalled," according to the submission, a copy of which was obtained by the Financial Times.

It was prepared by 20 leading mining companies, including Newmont Mining of the US and Western Mining Corporation of Australia. Both have applied for exploration licences in the Philippines.

"The significant progress and investment that has occurred over the last 18 months is in danger of being derailed," according to the document, which will be submitted to the government next week, the paper says.

It argues that the environmental provisions in the 1995 mining act which opened up the industry were "comparable with best practice worldwide" and expresses concern that the government is planning to modify the rules to the point of being "inappropriate and impractical".

approach to corporate lending is hardly inspiring either, from now on, we are told, high-risk borrowers will have to pay more than low-risk ones.

That this basic principle is regarded as exciting underlines how far banks like this have to go. Moreover, the new systematic approach to provisioning is no more than a presentational step forward.

Investors should ignore the essentially cosmetic increase in return on equity which will result. Still, the bank is right that using long-term average figures is more intellectually robust than the present ad hoc approach.

And although some will doubtless worry that the average figures will be pitched too low, this should not be a problem if investors are given enough information, as they should be, on actual annual loan performance.

France's deficit-cutting efforts fall far short of Germany's determined efforts to address underlying structural problems.

Mr Arthus appears to be salami-slicing, releasing the bad news in batches. Next week, for example, he will be forced to reveal a social security overspend of FF30bn (\$5.83bn) to FF35bn, which will presumably require him to take back the FF25bn net tax reduction he claimed to offer yesterday.

British Airways

British Airways is deftly juggling two audiences with very different agendas. "BA for the new millennium", proudly unveiled yesterday, will have been greeted with relief by many employees.

Moreover, for all the cautious wording of yesterday's statement, the long-term cost advantages of outsourcing - the opportunity to play off competing suppliers as well as an easy solution to high levels of unionisation - are powerful.

Realistically, there was never any doubt that yesterday's French budget would show the country meeting the Maastricht Treaty's 3 per cent deficit criterion next year.

For a start, the government believes the budget deficit this year will be 4 per cent of gross domestic product. Most forecasts suggest it will be closer to 4.3 per cent.

But ultimately, the "virtual airline" - little more than a marketing outfit - is surely a credible possibility.

Additional Lex comment on Next Page

SBC provision

Continued from Page 1

"veritable quantum leap" in provisions for its domestic problem loans. The bank used to treat these losses as extraordinary resulting in swings in annual provisions.

But it now feels it should calculate an expected default risk for its portfolio. This will result in an annual recurring charge of SFr600m initially.

To absorb any difference between actual annual provisions and the statistically expected loan losses, a general loan loss reserve of SFr2.4bn has been established.

The latest charges will reduce the group's Tier one capital from 3.9 per cent at the end of 1995 to around 7.7 per cent.

But the group has discussed the changes with bank regulators.

Izetbegovic wins poll battle to chair Bosnia presidency

By Bruce Clark and Laura Silber in Sarajevo

Mr Alija Izetbegovic was yesterday elected Bosnia's head of state and immediately called for fresh polls in Bosnian-Serb territory.

The 71-year-old Mr Izetbegovic, president of Bosnia since the first free elections in 1990, narrowly won the race for the chairmanship of Bosnia's tripartite presidency - one Moslem, one Serb and one Croat.

He urged the Organisation for Security and Co-operation in Europe to repeat the poll in Republika Srpska, the Bosnian-Serb entity which, with the Moslem-Croat Federation, makes up Bosnia.

His call came as western mediators engaged in hectic behind-the-scenes manoeuvring aimed at building on last weekend's elections and setting up multi-ethnic institutions to govern the loosely united country.

"Many voters were deprived by artificial (and illegal) means of voting in the federation while the same artificial (and illegal) means were used to increase the number of Serbian voters," said Mr Izetbegovic.

But international officials, who hailed Bosnia's first post-war elections as "violence free" and "mostly positive", are likely to play down complaints of ballot-rigging and electoral engineering.

Total votes cast in Serb territory exceeded the registered number of voting-age Serbs

according to the 1991 census. But the OSCE said more than half a million Moslem and Croat refugees had registered to vote in their former home districts.

In the nine months since the signing of the Dayton peace agreement to end the war, the commitment to the return of refugees has not been fulfilled - in particular in the Serb and Croat-held parts of Bosnia.

The Bosnian government yesterday warned that its own agreement to lay down arms was conditional on the Serbs agreeing to let Moslem refugees return to their homes. Only a handful of non-Serbs now live in Republika Srpska.

Early poll results for the parliaments of Bosnia and the Moslem-Croat Federation, and the president and assembly of Republika Srpska (Moslem-Croat) showed nationalist parties with a strong lead over moderate opposition parties.

Bosnia's presidency must govern by consensus and western mediators hope Bosnian Serb leaders - and their Croat nationalist counterparts, will abandon separatist demands.

Mr Izetbegovic won 729,304 votes, edging out Mr Momcilo Krajisnik, the Bosnian Serb candidate with 690,373.

Since 1990, Mr Krajisnik has been the right-hand man of Mr Radovan Karadzic, the former Bosnian Serb leader indicted for war crimes by the UN tribunal. Mr Kresimir Zubak was elected as the Bosnian Croat member of the presidency with 342,007 votes.

Olivetti

Continued from Page 1

of an extraordinary meeting being called. If Mr De Benedetti was reappointed then "those chances go up dramatically," Mr Shakerchi said.

Mr De Benedetti resigned after clashing with Mr Calo over strategy. He left the board but remained honorary chairman. The financial markets welcomed Mr De Benedetti's departure but the shares collapsed after Mr Renato Francesconi, director-general of the Olivetti holding company, resigned a day later, complaining that Olivetti's half-year figures were worse than the published results. The company denied the claims.

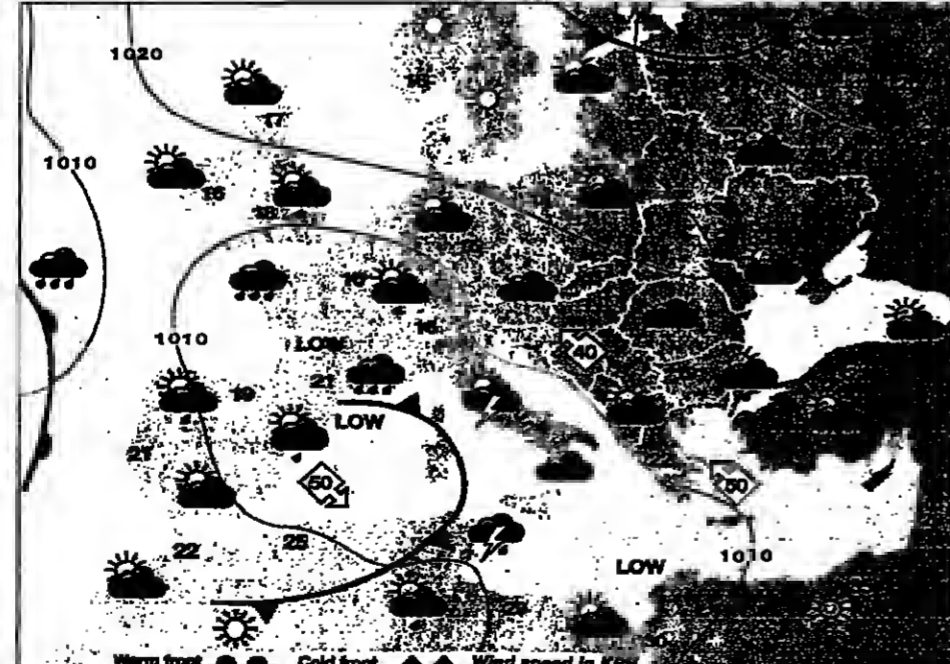
FT WEATHER GUIDE

Europe today

The Benelux will have sunny periods. There will be showers in Belgium and Luxembourg and an occasional shower in the south-west of the Netherlands. Northern Germany will be mainly dry with sunny periods but southern Germany will have showers.

Five-day forecast

A frontal system arriving from the Atlantic will cause rain over western Europe. The Balkans will have rain by the end of the weekend. High pressure will bring ample sunshine to Scandinavia. Russia will be sunny and dry.



TODAY'S TEMPERATURES

Table with columns for location, temperature, and weather conditions. Includes cities like London, Paris, New York, and Tokyo.

Frankfurt. Your hub to the heart of Europe. Lufthansa

Annual Conference 1996. Private Finance Panel. The Private Finance Initiative: "Delivering PFI". Panel of distinguished speakers including Rt Hon Kenneth Clarke MP QC.

مكتبة الصلح

● Billing: new software can detect phone fraud at an early stage
 ● Networks: digital processing is bringing 'intelligence' to telecoms
 ● Call centres: outsourcing of goods and services to these operations is on the increase Page 14

● Profile: Alcatel. Twelve months of tumultuous change appear to be paying off for the Paris-based telecoms equipment supplier
 ● Internet telephony: while cyberspace connections remain unprofitable, the traditional telephone companies have reason to be nervous Page 16

● SDH: Synchronous Digital Hierarchy has matured into a high standard for capacity transmission
 ● Profile: Siemens. The company's digital switching system is what drives its public telecoms division Page 17

● Mobile suppliers: the industry remains confident that there is still much more growth to come in building infrastructure and in the sale of handsets
 ● GSM/CDMA: the battle over which digital cellular phone technology will prevail is intensifying Page 18

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Ericsson. The company's strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 22

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

● Profile: Lucent Technologies. As well as having a strong position as a supplier of equipment, the company has access to well-regarded research laboratories in the Bell Labs Page 19

● ATM: Asynchronous Transfer Mode is taking off at last as increased competition means telecoms operators are ever more keen to improve their services. Page 21

International TELECOMMUNICATIONS

Technology to speed the traffic flow over the global network is essential to prevent an overloaded system - and further communications advances - from grinding to a halt, says Alan Cane

Building blocks of the revolution

The convergence of computing and telecommunications called multimedia has been promised for the past quarter century. Now the promise seems ready to be fulfilled as a number of key technologies reach maturity.

Fibre optic cabling, for example, can already transmit phenomenal amounts of information. A single pair of fibres each the width of a human hair can transmit more than 10 million millions bits (binary digits) of information a second, equivalent to half a million simultaneous two-way high definition television channels. The only limitation is the speed of the optoelectronic equipment needed to handle the transmission at each end of the cable.

Personal computers run on chips with the power - and complexity - of a small mainframe, sparking arguments over the terminal device for the home and office: a computer capable of behaving like a television or vice-versa.

Wireless technologies will make possible telephone calls from any two points on the earth's surface via a galaxy of satellites to be launched shortly by groups including Iridium and ICO.

The explosive growth of the Internet - about 50m subscribers now could rise to 500m by 2000 - and of multimedia services in general is the outward evidence of this convergence. But the speed of its development has taken the world's telecoms opera-

tors by surprise.

The global telecoms network was never intended to support such traffic. It was engineered for an era when customers lifted the receiver of their handset, spoke briefly and replaced it.

Now Internet customers may hog international lines for hours at a time. Telecoms working from home or from telecottages demand rapid transmission of data along lines never intended for such a purpose. The transmission of high fidelity sound, moving pictures and colour images makes sudden, huge demands on network resources.

Internet users, exasperated by an inability to make connections and by sluggish response times, are keenly aware that the Internet is overstretched. Telecoms experts are gloomier. The entire global network is close to collapse, they say.

The danger this represents for the global business community and for, for example, World Trade Organisation hopes of establishing a global economy underpinned by telecoms is underlined by a survey carried out by the Gallup opinion research organisation for British Telecom and MCI, published today.

It shows that nine out of 10 senior executives from the world's largest companies are convinced that telecoms will become more important to their organisations' expansion plans over the next five years.

Overall, respondents to the

survey said the critical factors for global expansion were, in order of importance, political stability, a skilled workforce and an efficient telecoms infrastructure, relegating cost of capital and availability of raw materials to the bottom of the list.

Reliable voice and data transmission were top of their lists but they complained that these needs were not being met. The strategic director of a UK-based mining and photochemical company said there was a need for "upgrading of speed and the quality of transmission of data."

The manager of a food manufacturing operation in Singapore wanted improvements in "videoconferencing, speed of data transfer internationally and international mobile telecoms" while a senior executive of a French multinational corporation complained of "the quality of phone lines."

The way out of the dilemma of expanding demand for telecoms services through an overburdened network is expected to be the adoption of a technology, Asynchronous Transfer Mode, at present owned principally by a small group of suppliers - Newbridge Networks, Stratacom, Cisco and Nortel among them.

"ATM [for a full explanation of this technology see the article on page 21] is ideal for a wide range of applications, including data communications, voice, imaging, full-motion video and multimedia," says the

consultancy Price Waterhouse. "Many industry observers predict that ATM will be the main carrier technology for such broadband services. Its characteristics, particularly scalability, make it ideal for the traffic demands such as multimedia expected on data networks in the future."

The fact remains that, as the International Telecommunications Union points out, nobody can predict which multimedia services will prove successful and which will flop. Business, however, is likely to make the biggest demands initially on the network. The ITU says: "There are several generic services that are

applicable to a range of businesses including videoconferencing and electronic messaging. In the past, they have been highly sensitive to transmission costs and capacity constraints, a problem which new technologies seek to eliminate."

The large operators are just beginning to install the first ATM systems. According to Dr Terry Matthews, chairman of Newbridge, "the window has opened". Operators will install ATM systems first to increase the capacity of their business networks and gradually move the technology into the public switching arena.

Commercial ATM services are already available in the

US from the regional operators, GTE and more recent competitors. Hong Kong Telecom, Singapore Telecom, BT and Telefonica, among others, are conducting ATM trials.

In the UK, the Integrated Communications Network, a private network set up co-operatively by London's six cable operators, Bell Cable, Cable London, Nynex CableComms, The cable Corporation, TeleWest and Videotron have announced what is claimed to be Britain's first wide area ATM network.

David Venn, ICN managing director, says he believes ATM equipment prices have fallen to reasonable levels.

"These developments coincide with the business community's increasing requirement to run a hand width-bungry (high capacity) applications... ATM will be the basic switching platform for private networks as the new century approaches and, ultimately, extend into the public domain too."

Conversion of the global telecoms network to ATM will be a mammoth task. But the experts are convinced that it will have to be undertaken and swiftly too if the greatest communications revolution in history is not to grind to a halt.

* The BT/MCI Global Communications Report 1996/97



It's music to your ears.

Let's make things better.

Now you can enjoy digital sound quality on a cordless phone which means you get all the mobility you want plus the quality of communications you need. Introducing the Philips DECT solution, an improved system based on the new digital standard for cordless telephony. The system operates on a SOPHO™ Open ISPB™ making it perfect for cordless office communications. And it's not just the sound that makes the difference. DECT gives you security of digital encryption for all your mobile messages. So if this sounds like music to your ears, for us on +31 544 46 20 13 for more information.

PHILIPS

Why over 4,000 multinational companies choose us as their gateway to success.

As one of the biggest users of leading-edge telecommunications technologies, Singapore Telecom offers an excellent telecommunications infrastructure and an extensive range of services for MNCs.

Our hubbing facilities enable MNCs to communicate privately on specially configured international digital leased lines. These range from 'no frills' lines to end-to-end managed lines, such as FNA TeleConnect and Worldsource Private Line services.

At our total facilities management centre, MNCs can house their computer systems and data communications equipment and even have them maintained by our highly-trained staff. And to cater to our customers' diverse requirements, our service portfolio includes Frame Relay, Virtual Private Network services and ISDN.

Our leased circuit, IDD, telex and ISDN rates are among the lowest to be found anywhere. And as a reassuring guarantee, MNCs know they'll always get the vital backup and quality service we're known for.

Through the advanced telecommunications we provide, we've not only helped Singapore become their gateway to the Asia Pacific, we've also helped make Singapore their gateway to success.

Please send me more information on:

Name: _____

Designation: _____

Company: _____

Address: _____

Industry: _____

Telephone No: _____

Fax No: _____

Singapore Telecom
Service First. Always.

Singapore Telecom 31 Esplanade Road, Concorde, Singapore 238322. Tel: (65) 734 7422. Fax: (65) 734 8005.
 Singapore Telecom Europe Ltd. Helix House, 20/23 Helixway, London EC2H 2JD, United Kingdom. Tel: 44-171-631 9999. Fax: 44-171-631 2288.
 Singapore Telecom USA 320 Post Road West, Suite 100, Westport CT 06880, USA. Tel: 1-203-454-6200. Fax: 1-203-454-1823.
 Singapore Telecom Japan Representative Office Shyogawa JI Men Building, 15th Floor 3-1, Tsukayama 4-Chome, Minato-ku Tokyo 105, Japan. Tel: 81-3-5426 8771. Fax: 81-3-5426 8772.
 Singapore Telecom Beijing Office: Room 1708, Lucky Tower A, 3 Dongshunhuan Road, Chaoyang District, Beijing 100027, China. Tel: 86-10-5467 0010. Fax: 86-10-5467 8955.
 Singapore Telecom Hong Kong Representative Office Suite 4, 35th Floor, Central Plaza, 18 Harbour Road, Wanchai, Hong Kong. Tel: 852-2580 1152. Fax: 852-2580 1182.

السوق العالمية

مختار من الاصل



Great dishes of the world

(As served 24 hours a day by Cable & Wireless)

If telecommunications are vital to today's world, one name is vital to telecommunications: Cable & Wireless.

With businesses in over 50 countries, and our own network of high-quality cable and radio links, we're the third-largest carrier of international traffic in the world.

We're involved in mobile businesses in 30 countries; from the UK, France and Germany through to Singapore, Hong Kong and the Caribbean.

We helped launch Asia's first privately-financed communications satellite, which has a "footprint" covering almost half the world's

population; we're laying fibre-optic cables linking the UK with Japan; and we're partnering VEBA of Germany to build new businesses in the EU.

If that sounds like a technical success story, it's no less a financial one.

Since Cable & Wireless was launched on the stock market in 1981, our growth in earnings per share and dividends has outstripped the UK average by over 200%*.

Above all, it's a success based on the unique Cable & Wireless mix of advanced technology and unparalleled experience of building trust, effective partnerships and

long-term relationships with governments, businesses and customers alike.

And with telecommunications set to be one of the world's fastest-growing industries over the next decade, we face the future with some very appetising prospects indeed.



CABLE & WIRELESS

*Past performance cannot be relied upon as a guide to future performance.

16 INTERNATIONAL TELECOMMUNICATIONS

Internet telephony: by Paul Taylor

Cyberspace threat not taken lightly

While calls on the Internet remain difficult, they are getting closer to mainstream usage

Less than 12 months ago most traditional telecoms carriers dismissed the threat of Internet telephony - making voice telephone calls over the Internet because of the poor speech quality, lack of standards and inconvenience of making calls over the Internet.

Most industry analysts and many of those promoting Internet telephony, still concede that voice communication over the Internet is not going to put the telephone companies out of business overnight. But several recent developments including dramatic improvements in Internet telephony software packages, mean that the threat posed by Internet telephony is being taken more seriously by traditional voice carriers.

Even before these advances, the prospect of cheap, even free, long-distance calls - excluding the cost of Internet access - lured hundreds of thousands of personal computer users to explore Internet telephony. An estimated 500,000 people have tried out some of the more than a dozen Internet telephony software packages enabling Internet users to speak to each other via the global computer network.

These users have had to put up with the many limitations of first generation Internet software that make a voice call over the Internet far more tricky than picking up the phone, and the results rarely as satisfactory.

The biggest problem with using early Internet phone software has been that both parties had to be logged on to the Internet to connect the call. Generally those with ordinary dial-up connections to the Internet could only make calls at pre-

arranged times. A second drawback has been the lack of standards. Different programs use different signal compression schemes and connection protocols so both parties needed to be using the same software, or programs using the same compression and connection methods, in order to communicate.

Another difficulty for users with dial-up access to the Internet, including most home computer users, has been that in order to link two computers via the Internet, it is necessary to know the Internet "address" of each computer. Unlike an e-mail address, which identifies a user, the address of a computer on the Internet - known as an IP address - is not always the same. In particular, many Internet access services assign new IP addresses to users each time they dial into the service.

Most Internet calls are therefore connected using a third computer, or server, that acts like a telephone exchange. The server matches names, rather than computer addresses, of registered users.

Finally, the quality of most Internet voice conversations is often poor and signal delays are almost inevitable in conversations because of the way data is transmitted across it in "packets" which are assembled and examined along the route by dozens of other computers and re-assembled at their destination.

These and other limitations meant that early Internet telephony has only appealed to the technophiles and to those such as university students in the US and new immigrants or expatriate workers who are far away from home. Indeed many people, including Bill Scheuster, chairman of PSINet, one of the world's largest Internet service providers, believes Internet telephony will remain a niche product appealing to only a relatively small per-

centage of users. Similarly Forrester Research, the US-based technology consultancy, argued in a recent report that "while anything free is sure to gain a lot of attention, today's Internet telephony is just a hobby product like CB radio".

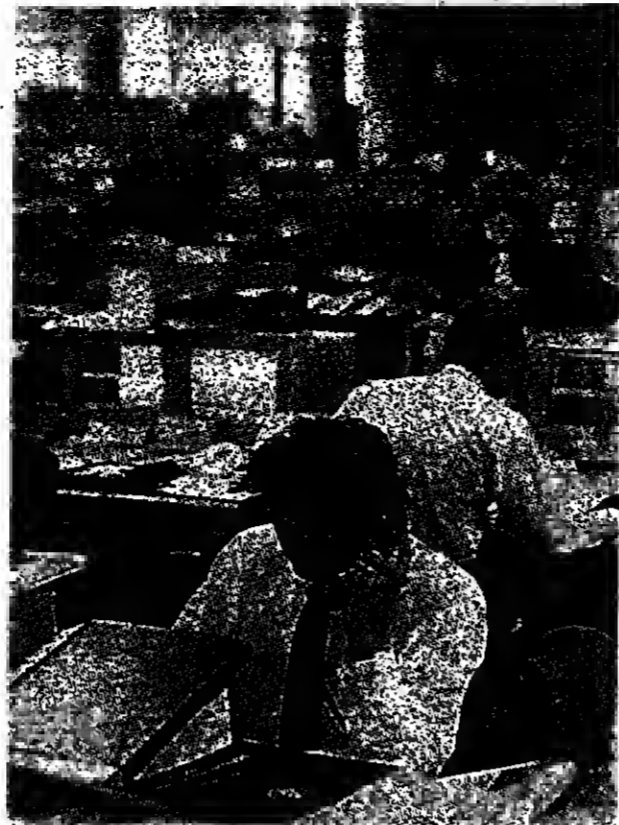
Not everyone agrees. And a number of recent developments could help move second generation Internet telephony products into the mainstream:

- Netscape Communications, the main supplier of Internet browser software, and Microsoft, the world's largest software group, have built telephony functions into their latest browsers. Netscape has bundled its "Cool Talk" conferencing facility into Navigator Web 3.0.

- VocalTec and IDT, two of the leading Internet telephony software product suppliers, have unveiled second generation products boasting many new features and improvements. For example VocalTec's Internet Phone for Windows 95 adds voice mail, caller identification and call waiting features to its software while IDT's Net2Phone product enables Internet users to call any telephone in the world from an ordinary PC for a fraction of the normal cost.

Net2Phone allows voice data to be carried over the Internet until it reaches IDT's US-based exchange where it is converted into a conventional telephone call ready to be received by any phone in the world. IDT charges 10 cents a minute for a call to anywhere in the US compared with the average \$2-a-minute charged by international carriers.

Meanwhile, VocalTec launched a service called the Internet Telephone Gateway Server last month which goes a step further by enabling every telephone user, regardless of whether they own a PC or a special VocalTec Internet phone, to make and receive phone



"Hello, is that cyberspace?" A number of recent dramatic improvements to voice made across the Internet have made this form of telephony a more viable prospect

calls over the Internet. Microsoft and Intel, the US chip-maker, have teamed up to develop Internet telephony standards. In March more than 100 other companies including Cisco and Sprint agreed to standardise voice, video and data integration into the World Wide Web bringing the prospect of true inter-operability closer.

Meanwhile, despite its limitations, Internet telephony's growth has prompted concerns among some US companies. In March, the America's Carriers Telecommunications Association, which represents 130 long-distance telephone companies serving mostly small businesses, urged the Federal Communications Commission to regulate Internet telephone software suppliers as if they were telephone companies.

The association argues that Internet telephone software companies are competing unfairly in the long-distance market because they are not subject

to the same FCC regulations that govern traditional long-distance carriers. However, the deep divisions within the industry are also emerging. For example, the largest US telephone companies including AT&T, MCI and Sprint have distanced themselves from the ACTA's action because they see the development of Internet telephony as a potential business opportunity.

However, as analysts at Nikko Europe noted in a recent report on the impact of the Internet on telecoms company earnings streams, Internet telephony highlights the threat to traditional voice telephony pricing models based on distance and "the question as to whether telcos should counter this threat by acquiring Internet access companies".

At the very least many analysts believe the advent of Internet telephony will accelerate the pace of call price reduction, for business as well as individual users.

PROFILE Alcatel

A stronger mobile connection

After a year of intense activity chairman Serge Tchuruk's plan may be working

It is now almost a year since shares in Alcatel Alsthom plunged more than 12.5 per cent, following the announcement that the then ailing French giant of the telecoms equipment sector had suffered a first-half loss and needed restructuring to reverse its decline.

The subsequent 12 months have been tumultuous by any standard. The Paris-based company has:

- reported the largest full-year loss in France's corporate history;
- embarked on a root-and-branch reorganisation to cut costs, involving the centralisation of purchasing, the restructuring of its telecoms activities along product lines rather than old national structures, and a severe pruning of the number of companies in the group;
- started discussions with the UK's General Electric Company about merging their GEC Alsthom power engineering and transport equipment joint venture with Framatome, the French state-controlled nuclear plant manufacturer;
- made public its interest in acquiring Thomson, France's defence and consumer electronics giant.

But, while the pace of change may have been unsettling both for investors and the company's nearly 200,000 staff, it looks like the action plan presided over by Serge Tchuruk, the group's chairman since mid-1995, may be starting to pay dividends.

Through group sales have continued to fall in the first half of 1996 to FF74.3bn

from FF78.3bn a year earlier, turnover in the telecoms sector was up to FF76.5bn from FF72.1bn. This reversed the downward trend of 1995 when telecoms sales dropped below the FF70bn mark. In a further encouraging sign, the group said its telecoms orders in the latest period were "particularly strong", advancing by more than 20 per cent.

While the profit implications of this upturn were not immediately apparent, the group confirmed earlier in the year it was looking to return to break-even in 1996. In 1995, the telecoms segment recorded a loss from operations before financing costs of FF13.3bn. This included a FF1.5bn non-recurring operating charge. The company said two-thirds of the decline stemmed from its network systems activities, with the market for network systems equipment marked by a severe drop in prices.

Part of Mr Tchuruk's strategy has been to diversify the group away from its core business of big public telephone exchanges - it remains the world's leading supplier of switching systems with an international market share, by its own estimate, of nearly 23 per cent - and into more profitable mobile phone and telecoms transmission equipment.

But as far as mobile is concerned, the company faces a challenge to keep pace with the industry leaders. Mr Tchuruk acknowledged earlier this year in an interview with Business Week that Alcatel would not be able to catch up with the likes of Ericsson and Motorola in the mobile sector. But he suggested the company could double its market share to 20 per cent "which is the average worldwide share of all our products".

The progress the company has made in the area has come to analysts' attention. "Alcatel has worked hard to redevelop the system and regain its reputation, effectively re-engineering its GSM systems and re-designing its handsets," said Morgan Stanley in a recent investment note. "We do not think Alcatel is too late to be a significant player in mobile communications."

To steer the group back to a good level of profitability by 1998, Alcatel's chairman has several other cards in his hand. The company retains a strong geographical presence in markets as different as France and China. Indeed, Mr Tchuruk has indicated that within a decade its China business would account for 10-12 per cent of global sales.

It is also expanding rapidly in other areas. In his address to this year's annual shareholders meeting in June, Mr Tchuruk singled out the acceleration of the company's presence in the US, saying sales of the group's telecoms subsidiary would pass \$1bn this year. "Thanks to the success achieved in transmission networks, against all its worldwide competitors".

Meanwhile, the company has weathered storms arising both from the corruption scandal that last year forced the departure of Pierre Suard, Mr Tchuruk's predecessor as chairman, and a separate legal wrangle concerning allegations of over-billing. This damaged relations with France Télécom, its principal client. Mr Tchuruk said in June he was "pleased with the atmosphere of confidence that has now been re-established with France Télécom".

David Owen

ONLY ONE COMPANY
KEEPS YOU IN TOUCH
WHEREVER YOU TOUCH DOWN
IN THE CZECH REPUBLIC

EuroTel
ALWAYS WITH YOU

EUROTEL PRAHA SPOL. S.R.O. POBŘEŽNÍ 3, P.O. BOX 11, 186 00 PRAHA 8, CZECH REPUBLIC
INFORMATION CENTER: +42 2 6701 6666

RSL Communications Ltd. is a global telecommunications company providing international voice, facsimile, and data services at attractive prices to small and medium businesses in residential markets and multinational corporations worldwide.

Founded in 1984, RSL Communications Ltd. offers a facility-based, state-of-the-art gateway switches. This network provides operators with low communication costs and direct connections worldwide.

our local offices:

RSL Communications Ltd. U.K. Ltd. +1 212-317-1000 (phone) +1 212-317-1000 (fax)	RSL Communications Ltd. U.K. Ltd. +44 181-457-3000 (phone) +44 181-457-3000 (fax)
RSL COM Denmark +49-69-6-6539-106 (phone) +49-69-6-6539-304 (fax)	RSL COM Sweden +46-445-2600 (phone) +46-445-2659 (fax)
RSL COM France SA +331-46-43-99-00 (phone) +331-46-43-99-34 (fax)	RSL Communications Corporation (USA) +1 516-465-7000 (phone) +1 516-794-9400 (fax)

RSLCOM
RSL Communications Ltd.

The Omniphone briefcase satellite terminal gives you completely independent access to the international telephone, fax and data networks.

- Self-contained with built-in antenna and power supply
- Fax and data facilities as standard
- LCD display giving you step-by-step setup guide in 5 languages
- Discreet and rugged briefcase styling
- At only 8.5 kilos, can be carried as hand luggage
- Almost impossible to jam or monitor
- Cost-effective - especially when combined with call charge billing via Marconi.

For our free information pack call us on
44 1245 275777

GEC-Marconi
Communications

Marconi House, New Street, Chelmsford CM1 1PL, UK
Tel (int) 44 1245-275777. Fax (int) 44 1245-275689.

مكتبة الجول

SDH: by George Black

System sets a high standard

SDH is becoming the industry norm as the networks catch on to its advantages

SDH (Synchronous Digital Hierarchy) has matured into a standard for high capacity transmission across most of the world.

Backed by the European Telecommunications Standards Institute (ETSI), the SDH infrastructure is being installed by network operators and large companies everywhere except in North America and Japan, where an offshoot of SDH known as Sonet is the standard.

Over the next five to 10 years SDH looks set to transform the telecoms industry by bringing very high reliability, resilience and flexibility to networks, as well as being able to handle much more traffic.

In the long term it should also reduce the costs and increase the profitability of the operators because networks will need less duplication and less maintenance.

"SDH is primarily about improving reliability," says Chris Lewis, principal analyst at Yankee Group Europe.

"If your road network is blocked up there is not much you can do about it, but if your telecommunications network is blocked up you can easily reconfigure it using SDH," says Dr Joseph Shapiro, corporate marketing vice-president for the SDH multiplexer manufacturer ECI Telecom.

For network operators, installing SDH is a necessary preliminary for supporting traffic which uses ATM (Asynchronous Transmission Mode), another emerging standard for high-speed networks. Together they can support the use of multimedia applications, mixing voice, video and data services.

SDH was designed to run at 155 megabits a second. This matches ATM in most cases, but SDH has already been boosted to 2.5 gigabits and is claimed to have the potential for 256 gigabits.



High capacity transmission: workers lay optical fibre. SDH can cope with volumes of traffic better

It is rapidly replacing older equipment based on the Plesiosynchronous Digital Hierarchy (PDH) standard in national networks. PDH is less able than SDH to support ATM and lacks its reconfigurability.

Most operators believe SDH is superior in delivering interoperability of systems and can cope with fast-rising volumes of traffic better. Unlike SDH, PDH never attained the status of an international standard.

SDH enables operators to manage networks from a central point. In the event of a failure it re-routes traffic automatically. It can be repaired quickly with software tools as it is remotely controlled.

Operators are installing it as fast as possible because it is potentially a competitive weapon, enabling them to provide better service and greater bandwidth. New operators, especially of mobile networks, are combining SDH fibre optic and radio systems to move into business more quickly.

Many operators have already installed SDH in their trunk routes and are

extending it to local branches and users' points of access. Large companies are also starting to use SDH, rebuilding their networks to improve communications between sites.

Network operators worldwide have been investing heavily in SDH. By the year 2000 fully SDH networks are likely to be widespread.

Worldwide, Australia has probably been the most enthusiastic in taking up SDH and has done this through the national operator, Telstra. In Europe, Germany has spent the most on installing SDH, mainly because Deutsche Telekom has rushed to buy the equipment while it is still a state monopoly. After privatisation it would probably not have been able to justify to its investors such a large expenditure in such a short time but would have had to phase it in over a 10 to 15-year period.

In the UK, Energis, the network operated by the National Grid electricity supply company, is the largest user, having implemented SDH throughout its network as a greenfield site.

Alistair Henderson, the firm's head of network strategy, says that SDH's reliability has enabled it to provide service level agreements that guarantee the availability of network services for its customers.

These are mainly users which depend on very high availability, such as the BBC, Mirror Group newspapers and Thomas Cook travel agency.

British Telecommunications and Mercury have also been moving towards adopting SDH; BT has already implemented it to boost the reliability of its services to banks.

France Télécom still has more old coaxial cable than BT and is heavily reliant on PDH, but the need to follow the rest of the world in adopting ATM may force it to speed up its adoption of SDH.

Beyond Europe, SDH has been successful because many countries follow European telecoms standards. East European governments, particularly the Czech Republic, seeking to modernise their infrastructures, are looking to SDH as the basis

for those programmes.

Likewise, the Chinese government is investing heavily in SDH as part of a bid to catch up with the industrialised nations in its communications. In the Middle East, Israel and Saudi Arabia are both firmly committed to using SDH.

As the demand side expands, the supply side may contract. Research and development costs have already far exceeded forecasts, partly because the manufacturers have had to shift their effort from hardware to software.

"Five years ago R&D on PDH was 90 per cent hardware. Today R&D on SDH is 70 to 80 per cent software," says Ian Taylor, a business manager for Alcatel Telecom, a leading SDH manufacturer.

With each enhancement to SDH, manufacturers need to add more to the hundreds of millions of pounds they have already invested. Some may well decide they cannot afford to go on alone, which may produce more mergers and partnerships.

Ericsson has to a great extent gone over to selling other manufacturers' products. Nortel (Northern Telecom) has decided to collaborate with former competitor DSC (Digital Switch Corporation).

Siemens, GPT (GEC-Plessey Telecom, in which Siemens has a controlling share) and Intel have chosen to form an alliance to develop new SDH products.

Evan Lucent Technologies (formerly belonging to AT&T) does not provide complete systems by itself but has enlisted partners such as the radio and satellite specialist Nera.

SDH and Sonet are not compatible within the same network, but SDH and Sonet networks should be fairly easy to connect. Bernie Jarvis, director of strategy for public networks at GPT, says that a limited amount of interworking between SDH and Sonet is already possible. This will increase steadily as operators and the International Telecommunications Union work on inter-operability.

PROFILE Siemens

Armed with a powerful asset

One highly profitable asset - a digital switching system - is what drives the public telecoms division of Siemens, Germany's second largest industrial group, and one of the few German companies with world market leadership in a number of cutting-edge technologies. This asset cross-subsidises a variety of other activities in the same division.

In terms of public telecoms products, Siemens and its subsidiaries is among the world's top three producers along with Alcatel and Lucent.

It claims to be market leader in sub-segments such as narrow band technology - the networking technology used in ordinary telephony - where its EWSID digital system is its cash cow.

EWSID is used by 288 telecoms operators in 86 countries, with 110m connections. Most of these, about 82m, are inside Germany, followed by China and the US. Siemens' technology is also the market leader in eastern Europe.

Until the 1970s, Siemens telecoms was merely the in-house supplier of the Bundespost, the former German telephone monopoly. But from a rate of 40 per cent in 1979/80, the division's foreign market share should reach 70 per cent this year, and this is forecast to go to 80 per cent in three years.

In telecoms networks based on Synchronous Digital Hierarchy (SDH) - an international digital transmission standard introduced three years ago - Siemens claims to hold a market share of 32 per cent, ahead of Alcatel at 21 per cent.

As well as traditional narrow-band technology, the wide spectrum of

activities in the public telecoms division includes:

- Access networks, which are networks connecting the end-user and the telephone network;
- Broadband technology for the transmission of large amounts of data such as those used in multimedia;
- Transport networks, for transmission between switching stations;
- Intelligent networks, allowing telephone operators to offer special services such as freephone;
- Network management, offering administrative services;
- Network engineering, which provides turnkey solutions for complete telecoms systems;
- Cables; and
- Mobile networks.

In mobile networks Siemens once lagged behind the competition.

"Siemens has made mistakes in this business area," says one analyst, who points to mobile telephone stations as an area that the company was slow to develop. "They failed to bring a base station to market in time."

Siemens claims that its technology in mobile telecoms has made much progress since, and that one third of all users of the Global System for Mobile Communications (GSM) standard, the predominant digital standard in Europe, route their calls via Siemens' base stations.

The proliferation of telecoms services, and the demand for more custom-made services is also driving sales of an increasing number of products and services.

Siemens' Telecoms Management Network and the Intelligent Networks units supply technologies allowing phone companies to offer customised services, such as

freephones, universal numbers (where national calls are charged at special rates), virtual private networks and internal corporate communication systems, which use public networks but behave as though they were private.

Increasing use of the Internet is also leading to new technologies. Siemens is developing a telephony system allowing users to communicate via the Internet, a system already on the market, but with quality as yet not comparable to that of standard voice telephony.

Another division in this complex web of businesses is the cable manufacturing. Siemens is Germany's only representative in this area.

From its conservative days in the 1970s and 1980s, Siemens now has a solid portfolio of electrical and electro-mechanical divisions, and is at last promising improved earnings.

But despite its technological potential, the public telecoms business is not a star financial performer for Siemens, although its performance has been ahead of that of Alcatel, its main European competitor in many segments of the market.

Triggered by weakness in domestic business, the public telecoms division's turnover was only DM10.4bn to end-September 1995, a fall of 19 per cent from the previous year.

Turnover has since recovered and profitability is rising. Analysis forecast that the division's profit contribution of DM206m last year may go up to DM250m this year, and then to DM300m in 1997.

Wolfgang Münchau

Body,

Mind,

Spirit.



A GROWING BODY OF NEW TECHNOLOGY FROM THE G.R.A. THE GEORGIA RESEARCH ALLIANCE IS AN ECONOMIC PARTNERSHIP OF GEORGIA'S RESEARCH UNIVERSITIES, BUSINESS COMMUNITY AND STATE GOVERNMENT. ONE PROGRAM, CREATED BY DR. FRAN TEDESCO, HAS FOSTERED SUCH NEW TECHNOLOGIES AS TELEMEDICINE, ENABLING DOCTORS TO DIAGNOSE PATIENTS HUNDREDS OF MILES AWAY. THE NEW YORK TIMES CALLS IT "THE MOST SOPHISTICATED DEMONSTRATION IN THE COUNTRY."

A MIND THAT CAN SEE INTO THE FUTURE. DR. RAO TUMMALA HAS THE VISION TO SEE WHERE TECHNOLOGY IS GOING, AS WELL AS THE CAPACITY TO GET IT THERE. THE HOLDER OF 21 PATENTS AND THE CREATOR OF 46 OTHER INVENTIONS, DR. TUMMALA DIRECTS A RESEARCH PROGRAM AS PART OF GEORGIA'S ADVANCED COMMUNICATIONS INITIATIVE. HIS WORK DEVELOPING HIGH-PERFORMANCE, LOW-COST MICROCHIPS WILL HELP STIMULATE FUTURE BREAKTHROUGHS IN THE FAST-PACED WORLD OF CONSUMER ELECTRONICS.

THE ENTREPRENEURIAL SPIRIT OF TED TURNER, CHAIRMAN AND PRESIDENT OF TURNER BROADCASTING SYSTEM. WHAT BEGAN IN 1970 WITH A SINGLE ATLANTA TV STATION IS NOW A GLOBAL COMMUNICATIONS COMPANY - AND THE WORLD'S LEADING SUPPLIER OF ENTERTAINMENT AND NEWS PROGRAMMING, INCLUDING CNN AND TNT. VISIONARIES SUCH AS MR. TURNER, DR. TEDESCO AND DR. TUMMALA PERSONIFY THE KIND OF ENERGY AND THINKING THE GEORGIA RESEARCH ALLIANCE WILL BE SUPPORTING INTO THE 21ST CENTURY.



Georgia Department of Industry, Trade & Tourism

FOR MORE INFORMATION, WRITE: GEORGIA USA, DEPT. FIN-BMS, P.O. BOX 2776, ATLANTA, GA 30301, USA; OR VISIT US AT <http://www.gra.org>

FT
FINANCIAL TIMES

Dear Reader,

The Financial Times publishes country, industry and financial surveys (ie. separate editorial features) several times per week. In order to help ensure that these meet your needs as a reader, we have commissioned Framework, an independent market research company, to conduct a research project.

Please could you help us by taking a few minutes to complete this questionnaire, fold, and seal return it to the research company using the International Business Reply Service - you do not need a stamp or an envelope.

The research results will be used by our editorial and marketing staff. Your reply will be treated in the strictest confidence as guaranteed by the code of conduct of ESOMAR (the European Society for Opinion and Marketing Research). We do not need you to provide your name, address or company details.

If you have any further comments about this, or other FT surveys, please do not hesitate to write to me directly.

Thank you for your help.

Yours sincerely,

Rhys David

RHYS DAVID
SURVEYS EDITOR

YOUR READERSHIP OF THE FINANCIAL TIMES

(1-6)

1. How often do you usually read or look at:
- a. Monday to Friday Issues of the Financial Times?
- b. Saturday Issues of the Financial Times?
- | | | | |
|--|----------------------------|----------------------------|--|
| | Monday to Friday (7) | Saturday (8) | |
| Very frequently - at least 4 issues out of 5 | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | |
| Quite often - 2 or 3 issues out of 5 | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | |
| Less often | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | |
| Never | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | |
2. Where do you usually read the Financial Times? (please tick all that apply)
- | | | | |
|------------------|----------------------------|----------------------------|--|
| | Monday to Friday (9) | Saturday (10) | |
| At work | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | |
| At home | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | |
| While travelling | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | |
| Elsewhere | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 | |
3. The Financial Times publishes surveys most days each week, either within the main body of the newspaper, or as separate sections. On average, assuming five FT surveys are published per week, how many do you read or look at (either on the day they are published or at a later date)?
- | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| none | less than 1 | 1 | 2 | 3 | 4 | 5 | (11) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

YOUR READERSHIP OF THIS FT SURVEY

- The following questions relate to this International Telecommunications survey.
4. How much of the International Telecommunications survey did you read/do you expect to have read once you have finished with it?
- | | | |
|-------------------------------|----------------------------|------|
| All | <input type="checkbox"/> 1 | (12) |
| Almost all | <input type="checkbox"/> 2 | |
| About half | <input type="checkbox"/> 3 | |
| Less than half | <input type="checkbox"/> 4 | |
| Did not read it - skip to Q11 | <input type="checkbox"/> 5 | |
5. Apart from yourself, how many other people will read your copy of this survey?
- | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| None | 1 | 2 | 3-4 | 5-9 | 10+ | don't know | (13) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
- 6a. What will you do with this survey once you have finished reading it?
- | | | |
|---|----------------------------|------|
| Keep the copy or selected pages for further reference | <input type="checkbox"/> 1 | (14) |
| Pass it on to a colleague | <input type="checkbox"/> 2 | |
| Throw it away - skip to Q7 | <input type="checkbox"/> 3 | |
- 6b. If this survey is kept for future reference, where will it be kept?
- | | | |
|---|----------------------------|------|
| In the company library/another central location | <input type="checkbox"/> 1 | (15) |
| In your own office | <input type="checkbox"/> 2 | |
| In another office/department | <input type="checkbox"/> 3 | |
| At home | <input type="checkbox"/> 4 | |
| Elsewhere | <input type="checkbox"/> 5 | |
7. A number of statements are written below which might apply to the International Telecommunications survey. Please indicate how strongly you agree or disagree with each statement.
- | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|------|
| | Agree strongly | Agree slightly | Disagree slightly | Disagree strongly | |
| | 1 | 2 | 3 | 4 | |
| It is well written | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (16) |
| It contains information which is new to me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (17) |
| It is useful to me in my work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (18) |
| It is well laid out and presented | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (19) |
| It is authoritative and credible | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (20) |
| It is independent and unbiased | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (21) |
| It is up to date | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (22) |
8. Overall, how would you rate the International Telecommunications survey?
- | | | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|------|
| Excellent | Very Good | Fair | Poor | (23) |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | |

9. Are there any other comments you have about this survey? (please write in)
- _____ (24)
- _____ (25)
- _____ (26)
10. Which, if any, of the advertisers listed below do you remember seeing in this survey?
- | | | | | |
|----------------------|----------------------------|-----------------------------|----------------------------|------|
| Deutsche Telekom | <input type="checkbox"/> 1 | Lucent Technologies | <input type="checkbox"/> 7 | (27) |
| Cable & Wireless | <input type="checkbox"/> 2 | Siemens Nixdorf | <input type="checkbox"/> 8 | |
| Nortel | <input type="checkbox"/> 3 | Telecom Italia Mobile (TIM) | <input type="checkbox"/> 9 | |
| Singapore Telecom | <input type="checkbox"/> 4 | Locate in Scotland | <input type="checkbox"/> 0 | |
| British Telecom (BT) | <input type="checkbox"/> 5 | Philips | <input type="checkbox"/> X | |
| Ricoh | <input type="checkbox"/> 6 | | | |

ABOUT FT SURVEYS IN GENERAL

- 11a. Which, if any, of the following surveys published recently by the Financial Times did you read or look at?
- | | | |
|-----------------------------------|----------------------------|------|
| Aerospace | <input type="checkbox"/> 1 | (28) |
| Kansai | <input type="checkbox"/> 2 | |
| Reinsurance | <input type="checkbox"/> 3 | |
| Infrastructure in Latin America | <input type="checkbox"/> 4 | |
| Power in Asia | <input type="checkbox"/> 5 | |
| Europe's Most Respected Companies | <input type="checkbox"/> 6 | |
| Philippines | <input type="checkbox"/> 7 | |
| None of these | <input type="checkbox"/> 8 | |
- 11b. Which, if any, of the Telecommunication surveys published earlier this year, did you read or look at?
- | | | |
|---|----------------------------|------|
| UK Telecommunications Market (March) | <input type="checkbox"/> 1 | (29) |
| Asia/Pacific Telecommunications (April) | <input type="checkbox"/> 2 | |
| Telecommunications in Business (June) | <input type="checkbox"/> 3 | |
| None of these | <input type="checkbox"/> 4 | |
12. A number of statements are written below which might apply, in general, to the range of surveys produced by the Financial Times. Please indicate how strongly you agree or disagree with each one.
- | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|------|
| | Agree strongly | Agree slightly | Disagree slightly | Disagree strongly | |
| | 1 | 2 | 3 | 4 | |
| FT surveys are well written | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (30) |
| They are useful to me in my work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (31) |
| They cover a wide range of topics | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (32) |
| They provide information I cannot find elsewhere/would not see otherwise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (33) |
| They are better than those produced by other publications | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (34) |
| The writing is independent and unbiased | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (35) |
| They help me to keep informed about new trends and developments | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (36) |
| They are accurate and up to date | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (37) |
13. In general, how would you rate FT surveys?
- | | | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|------|
| Excellent | Very Good | Fair | Poor | (38) |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | |
14. In which subjects or geographical areas are you particularly interested? (please include any which are not currently covered by the Financial Times)
- _____ (39)
- _____ (40)
- _____ (41)

15. In which, if any, of the following ways do you use FT surveys? (please tick all that apply)
- | | | |
|--|----------------------------|------|
| As a briefing before visiting the country or region featured | <input type="checkbox"/> 1 | (42) |
| As a part of your background research on a particular project | <input type="checkbox"/> 2 | |
| To keep you up to date with a particular industry, country or region | <input type="checkbox"/> 3 | |
| To incorporate into presentations, reports or other documents | <input type="checkbox"/> 4 | |
| To show clients, suppliers or other contacts | <input type="checkbox"/> 5 | |
| To keep you generally informed | <input type="checkbox"/> 6 | |
| In other ways (please write in) | <input type="checkbox"/> 7 | |
16. How do you generally find out about forthcoming FT surveys?
- | | | |
|--|----------------------------|------|
| I look at the Guide to the Week (in Monday's paper) | <input type="checkbox"/> 1 | (43) |
| I see the advance notices in the paper | <input type="checkbox"/> 2 | |
| I receive an advance topic list from the Financial Times | <input type="checkbox"/> 3 | |
| I just come across them on the day of publication | <input type="checkbox"/> 4 | |
| Editorial contact | <input type="checkbox"/> 5 | |
| Advertising contact | <input type="checkbox"/> 6 | |
| PR contact | <input type="checkbox"/> 7 | |
| Other | <input type="checkbox"/> 8 | |
17. In which of the following ways have you obtained copies of FT surveys? (please tick all that apply)
- | | | |
|--|----------------------------|------|
| In your own or someone else's copy of the paper | <input type="checkbox"/> 1 | (44) |
| Had it passed on to you by a colleague | <input type="checkbox"/> 2 | |
| In a library, archive or similar place | <input type="checkbox"/> 3 | |
| Via www.FT.com (the Financial Times on the Internet) | <input type="checkbox"/> 4 | |
| On computer disc | <input type="checkbox"/> 5 | |
| On microfiche | <input type="checkbox"/> 6 | |
| Via FT Profile | <input type="checkbox"/> 7 | |
| Purchased a back copy from the Financial Times | <input type="checkbox"/> 8 | |
18. Have you ever contacted a company or organisation as a result of seeing an article or advertisement in an FT survey?
- | | | |
|--------------------------------------|----------------------------|------|
| Yes - after reading an advertisement | <input type="checkbox"/> 1 | (45) |
| Yes - after reading an article | <input type="checkbox"/> 2 | |
| No | <input type="checkbox"/> 3 | |
19. If FT surveys were available electronically, in which of the following formats would you be interested?
- | | | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|------|
| Computer diskette | CD Rom | Via the Internet | None of these | (46) |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | |

THANK YOU FOR COMPLETING THE QUESTIONNAIRE
PLEASE FOLD AND RETURN IT TO FRAMEWORK AT THE ADDRESS OVERLEAF

xx

*

FOLD 4

BUSINESS REPLY SERVICE
Licence No. LON2207



Framework
1 Rosebery Avenue
LONDON
EC1B 1WR

FOLD 5

FOLD 3

FOLD 1

FOLD 2

مخزن البريد

The revol

No strang
innovatic

ATM: by Michael Kenward

The revolution gathers pace

The technology is at last being embraced as competition intensifies

After half a decade of promise, the telecoms industry is finally adopting ATM technology. And it is doing so at an increasingly rapid pace. As with other aspects of telecoms, competition brought about by deregulation and the growth of the Internet are driving forward ATM.

ATM (Asynchronous Transfer Mode - confusion with a computer teller machine has not helped sell the technology in some markets) is a set of digital communications standards that define a technology for routing messages between customers.

Two communications links now serve most desks, the telephone and the network for the computer or workstation. ATM can unite the two. It can also unite the local area network (Lan), the corporate wide area network (Wan) and public telecoms networks.

Unlike older synchronous systems, ATM circuits do not establish fixed links, holding the connection and all of its capacity even when there are gaps in a conversation, for example, or when the call contains less data. ATM takes a message - a telephone call, signals from

a video conference, computer data, or any other information - and turns it into small "cells".

As well as its payload, the communication data, each digital cell carries house-keeping information including addresses of the call's destinations. Like wagons travelling along a railway line, each cell can carry a different customer's traffic, travelling in the most efficient order. The cells come together at the end of the journey, as directed by the addressing information, to recreate the entire conversation.

Bandwidth is the magic word in ATM technology. Video and high-quality graphics are high bandwidth applications; they send a lot of data through a network in a short time. Voice needs very little bandwidth. ATM allows the efficient combination of high and low bandwidth traffic.

By making more efficient use of a telecoms link, ATM can cram much more traffic into a network, through a fibre-optic trunk or a copper cable for example. In 1993 Comsat, a communication satellite company, demonstrated that commercial satellites can carry ATM traffic. Later this year Comsat will offer new ATM services, free for a promotional trial period, over the Intelsat satellite telecoms system.

In theory, ATM allows customers to buy bandwidth on demand, to dial into a network and to send whatever traffic they wish. No longer would customers need to book lines for video conferences, for example. But this depends on the arrival of switched ATM that customers can call up in an instant, a facility now becoming available but only in some markets.

So while ATM was conceived as a standard for the world's telephone systems, so far it has done more for data traffic over Lans, a relatively minor application when the idea surfaced.

ATM has already made an impact in the healthcare sector, where hospitals, media facilities and university medical centres use ATM video conferencing, distance learning and remote diagnostics.

Other targets for ATM technology include natural resource exploration, film production, publishing, news delivery, research and education, and banking and finance.

With so much going for it, why has ATM taken so long to catch on? It turns out that achieving all the potential is not as straightforward as the propaganda suggests. ATM should have been launched as the best way to offer high speed data services, rather than a way of integrating voice and data, says Mr Duncan Black, manager of Mercury's Technical Consultancy.

"It wasn't sold that way, which is why ATM has got a bad press," he adds. "Voice is not an easy thing to integrate with an ATM structure." Mr Black does not expect ATM to make significant inroads into voice traffic for "somewhere between five and 10 years".

These are indeed still early days for ATM in public telecoms networks. BT and France Telecom held the first video conference test between the UK and France, using the European ATM Pilot network, as recently as August 1994.

The state of ATM technology means that there is still room for research. The European Union launched a follow up to the ATM Pilot network in April. Project James (Joint ATM Experiment on European Services) is a collaborative project between 18 European network operators.

Project James will conduct research into the use of ATM technology for broadband networks with the aim of developing a Europe-wide ATM-based interconnection structure together with asso-

ciated experimental services. ATM has made more progress in data communications where there are two key drivers in the spread of the technology. One is the rapid traffic growth. The other is the demand for high bandwidth for certain applications, and the subsequent need to integrate those customers with existing networks.

Networks installed for internal e-mail now carry World Wide Web pages as companies install 'intranets'. These internal WWW sites are used for such things as centralised sales records and service manuals. With increasing use of graphics, movies and sound, all heavy consumers of bandwidth, sending this information across the Lan can quickly outstrip its capacity.

"It blows the average corporate network out of the water," says Mr Black. A major advantage of ATM is that it offers the possibility of quickly increasing capacity by bolting on extra modules. ATM is, says Mr Black, "the only technology that really does scale up quickly".

While 95 per cent of the people on a network may not need lots of bandwidth, they still have to be connected to the same network. This connectivity is only now becoming possible at a reasonable cost. Until recently, says Mr

Black, too little effort went into integrating ATM into existing networks.

There just wasn't the hardware around to bring ATM to the desktop. This is now beginning to happen, he explains, as companies like IBM offer the technology to bring ATM to the desk more economically.

IBM's own experience shows that potential customers overestimate the likely cost of implementing ATM. The computer company sponsored a survey earlier this year by Total Research.

One finding in the survey of 277 organisations in the UK was that network managers estimate the cost of ATM at £750 per user which is about twice the true cost.

The market for ATM could explode when people realise that it costs are not significantly more than for older technologies.

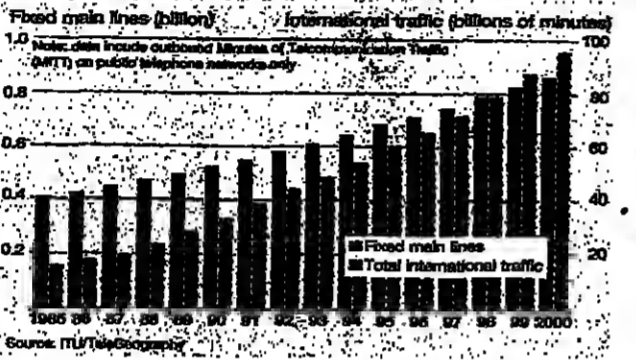
The survey showed that while just two of the companies questioned had already implemented ATM, some 14 per cent expected to do so within a year. Of this 14 per cent, 46 per cent aim to use ATM on the Lan backbone, 36 per cent plan to use it for Wan connections, and 26 per cent intend to extend it to the desktop.

The merger of the local and corporate network, the Lan and the Wan, and the desire to connect these to the public telecoms system,



Film producers use ATM to transfer moving images between production units. Columbia Pictures Industries

Driving technology: global traffic growth



PROFILE Lucent Technologies

No stranger to innovation

Few telecommunications equipment suppliers can trace their history as far back as 1896, but Lucent Technologies, the unit recently spun off from AT&T, has a tradition of innovations that has it well placed for the changing telecoms markets.

Along with its strong position as a key supplier of cutting-edge telecoms equipment, Lucent also has the well-regarded Bell research laboratories and is involved in the development of new manufacturing technologies for advanced chips used in telecoms applications. It is also pioneering technologies such as its Inferno operating system, which could transform the way telecoms networks are used and spawn a significant market for new communications devices.

The big news at Lucent this year was that its parent, AT&T, planned to take Lucent public with an initial offering valued at about \$15bn. AT&T said that the Lucent spin-off would allow Lucent to compete better in sales to telephone companies without the problems associated with being linked to a large US long-distance telephone company.

A key feather in Lucent's cap is that it now has control of the famous Bell Labs, which have been a fertile ground for developing successful new technologies. With strong competition in the communications market, Lucent hopes Bell Labs will give it a competitive edge.

Bell Labs has helped AT&T register an average of one patent a day since 1925. Its communications technology contributions include the development of TV transmission, the transistor, the laser, the first communications satellite Telstar, touch-tone telephones, and key software technologies, notably the Unix operating system and the C++ programming language.

As software becomes an increasingly vital part of managing complex high-speed telecoms technologies such as frame relay and asynchronous transfer mode, a strong software base is an important asset.

Lucent is trying to establish its Inferno system software and Limbo language as an industry standard for enabling a wide range of software applications to be distributed over communications networks and run on virtually any hardware platform. This is a similar approach

to that pursued by Sun Microsystems with its JavaOS systems software and Java computer language. An advantage of technologies such as Inferno and Java is that software developers can create just one version of a program and be able to run the application on computer devices ranging from set-top TV boxes, handheld wireless computers, desktop PCs and mainframes. This saves developers an enormous effort in porting their software to different hardware platforms.

Mike Skarzynski, vice-president and general manager of Lucent's Inferno business unit says: "Inferno comes out of Bell Labs and it has some of the same team of developers that created the Unix operating system. It will solve a real need in the market that network service providers and others are facing."

He notes the comparisons made between Inferno and Java, but says that the two technologies are complementary. The Inferno operating system is designed to take up as little as 1MB of memory, making it possible to run Inferno and its applications on a wider range of computer devices without a large system memory. Native versions of Inferno have been developed for X86, MIPS, ARM platforms, PowerPC and Motorola microprocessors.

Inferno, however, will face a hard road in establishing itself in the wake of the enormous support that Sun's Java has received. Large telecoms companies and computer companies have announced plans to license Java and develop Java-based applications.

"AT&T has not had much success in recent times in establishing some key computer technologies. It was a big supporter of General Magic's Telescript technology which offers some of the same benefits as Inferno. And Java has captured a lot of attention," says Scott Rubin, an analyst at US market research firm Jupiter Communications.

Although Lucent says it will support Java applications, competitors such as Nortel and Siemens Rolm are both strong Java supporters and are likely to prefer using Java instead of Inferno - a technology from a big competitor. Lucent faces a risk in that its strong focus on Inferno could lead to a dead-end in terms of support from key third parties and that it may wind up behind the market when it comes to Java applications.

The days when a strong company such as Lucent could forge ahead alone with key technologies are gone and the complexity of modern communications technologies requires partnerships. Lucent is realising the need for these and has been announcing key partners in various markets. Earlier this year, it announced an alliance with network equipment provider Bay Networks to provide integrated voice and data networks over ATM for use in multimedia applications.

A key management idea influencing Lucent and others, is to look at its competitors as potential partners in what is termed "co-opetition". And Lucent will be announcing more partnerships in this vein later this year.

As corporations require more multimedia data communications, new markets for Lucent can be created. For example, it is trying to position its flagship SE switch as capable of supporting any type of media such as voice, wireless, video, and computer data.

The popularity of the Internet has placed great demands on telecoms companies to increase the speed of access for Internet users. Current modem technology over plain telephone lines is limited to about 33 kilobits per second, while Integrated Services Digital Network modems can handle speeds of about 128 kilobits. Lucent has pioneered Asynchronous Digital Subscriber Line (ADSL) technology which offers several megabits per second communications over copper phone lines.

However, earlier this year, Lucent sold its Paradyns ADSL technology unit saying that it prefers to be a customer of Paradyns. This should also help it take advantage of the best ADSL technologies available rather than commit itself to one technology.

John Bernat, president of multimedia ventures and technologies for Lucent Technologies explains, "Lucent Technologies can gain the advantage of Paradyns' technologies without owning and operating the business, since we will still have access to Paradyns' current and future products as a customer."

While Lucent faces many of the same challenges that its competitors are grappling with, its strong technology base should ensure future successes.

Tom Foremski

THE TECHNOLOGY OF THIS THING IS SO ADVANCED I CAN'T TALK TO PEOPLE WITH ORDINARY PHONES



We help people talk, once they're roaming.

Telecom Italia Mobile

International TELECOMMUNICATIONS

PART 1 IN THIS SURVEY

While national governments are busy liberalising their telephone industries, the rate of change, shows broad geographic differences, writes Alan Cane

Global sell-off gathers pace

The global telecoms business is peering into a future guaranteed to bring unprecedented structural change as a result of liberalisation, globalisation and a shift from traditional telephone services to multimedia.

Companies once seen as natural state-owned monopolies are being privatised at a rate which will force the investment community to dig deep into its pockets. A first tranche of Deutsche Telekom comes to market in November with a \$10bn price tag. Stet of Italy and France Télécom are expected to follow early next year.

At a technical level, moreover, the industry is faced with replacing the infrastructure of the global telecoms network before it ceases to be a burden under the demands of customers which were never envisaged when the present network was designed.

Opening up most of the world's telecoms markets to competition remains crucial to the creation of an advanced international telecoms network capable of supporting a global economy.

World Trade Organisation talks earlier this year failed to secure such a global agreement. A new deadline of February 15 next year has been set in the hope that enough major countries can be persuaded to promise to open their markets to the extent that an accord can be reached.

The pace of change, however, shows broad geographic differences. The North American market, which accounts for 30 per cent of the world's telecoms traffic, is in a ferment of activity over opportunities made possible by the 1996 Telecommunications Act, which opened the country's local, long-distance and cable television service markets to full competition.

It allows, for example, the regional phone companies, the "Baby Bells", to compete with AT&T and other long distance carriers in the lucrative long-haul market. Only weeks after the passage of the Act, a number of the Baby Bells have picked strategic partners to improve their competitive position. SBC Communications and Pacific Telesis announced a merger in April. Bell Atlantic and Nynex followed suit three weeks later.

The ground rules for competition in the US in this newly liberalised environment have yet to be finalised. Reed Hundt, chairman of the Federal Communications Commission, the regulatory body charged with setting the rules, said earlier this month: "If we do our job right, we will pull off the most successful bit of de-monopolisation since the break-up of the Standard Oil Trust in 1911; we will boost America's world leading productivity rate; we will stimulate hundreds of billions of dollars in new investment in the next 10 years and as a result we will see as many as 1m new jobs created in that time period."

Fears that such a communications revolution, led by companies whose entrepreneurial spirits and efficiency had been honed in competitive markets, would leave Europe lagging were behind the decision to open the EU's voice, data and infrastructure markets to full competition from January 1, 1998.

Similarly, the dominant operator in the Asia Pacific region, NTT of Japan, which has an 87 per cent share of its domestic wireline telephone business, is facing renewed calls for its break-up. A study panel within the Japanese telecoms ministry argued that breaking the group into a

single long-distance operator and two local operators would speed liberalisation of the domestic industry and improve earnings.

NTT countered, however, that the break-up would not only be prohibitively expensive, but that it would damage its global competitiveness and reduce investment in telecoms R&D. The Japanese government has delayed a decision on the break-up until the end of the current financial year.

An immediate effect of competition is to reduce prices. Despite the fact that only the UK, Sweden and Denmark operate fully liberalised markets, prices have been falling across Europe for the past decade as operators prepare for 1998.

Analysts, a Cambridge-based consultancy specialising in calculating telecoms costs says: "As liberalisation proceeds and European operators increasingly move into each other's markets, there will be pressure for [currently] non-liberalised countries to bring their prices into line with liberalised countries."

Mobile phone services in Europe have, in general, been liberalised from the outset. Even so, the most dramatic price decreases have been seen in countries with a number of competing operators. In the UK, for example, where Vodafone, Cellnet, Orange and Mercury One-2-One are fighting fiercely for market share, high usage business customers have seen price declines of more than 60 per cent.

In the mature economies, however, there is little scope for growth in the basic business of providing telephone lines and services. Increased competition, lower technology costs and falling prices mean telecoms operators, awash with cash now, will find profit margins squeezed by the turn of the century. Price pressure will apply to large and small operators and to fixed wire and mobile operators. Operators used to monopoly profits such as Deutsche Telekom and France Télécom will be hardest hit.

The measures to counter the threat of declining profitability include the formation of strategic alliances at a global level to compete for the business of large international customers and local alliances to challenge incumbent operators on their home territory. The principal global alliances are Concert, established by BT and MCI of the US, Global One, set up by Deutsche Telekom, France Télécom and Sprint of the US and WorldPartners led by AT&T.

Cost-effective operations will become crucial as older operators burdened with a bureaucratic decision-making structure and a surfeit of staff, fight for market share against a host of nimble new operators.

The need for continued heavy expenditure on infrastructure and new services may see operators make increasing use of non-recourse funding for major projects. They are already putting pressure on their suppliers to cut prices.

Multimedia services in a variety of forms from video-conferencing to Internet services and broadcast entertainment offers operators a golden opportunity to maintain and increase profitability.

Today's networks, however, are not up to the task. Much depends on the operators' commitment to creating infrastructure suited to 21st century services.

Alan Cane explains why the global telephone network is at risk from the demands of the multimedia revolution on page 13 of this survey.



- The global alliances: articles on Global, WorldPartners and Concert follow pattern of recent spate of carrier link-ups
- South Africa: the state disparities in the provision of telephone services Page 2
- Interview: Alan Cane talks to Richard Brown, newly appointed chief executive of C&W Page 3
- Germany and BT: articles examine the new climate of competition in Europe's largest economy and the prospects of Deutsche Telekom
- France: the investment gains benefiting from the telecoms boom Page 4
- Europe: developments in France, Italy, the UK and Russia and eastern Europe Pages 5 and 7
- Asia: articles cover Japan, Taiwan, China, India and Pakistan Pages 8 and 9
- The Americas: recent trends in the US, Canada, Mexico and Brazil Page 11

The world is now open for business.



To be a key player in the global market, you need a truly global communications network. One that links all your customers, suppliers and partners wherever they are in the world. BT (British Telecommunications plc) has that network. Our global network for data, voice and image puts you in touch with over 1,300 cities in more than 110 countries. Lets talk business.

Call us on +44 117 921 7721 (Europe) or +61 2 269 1745 (Asia Pacific).

هاتف الاتصالات

2 INTERNATIONAL TELECOMMUNICATIONS: GLOBAL ALLIANCES

Global Ones by Michael Lindemann

Tensions hard to avoid

Adapting to new partners' business styles poses headaches for global players

Ron Sommer, Deutsche Telekom's chief executive, enjoys taking a dig at his competitors.

business styles of France Télécom, the state-owned French carrier, and Sprint, the third biggest US long-distance carrier.

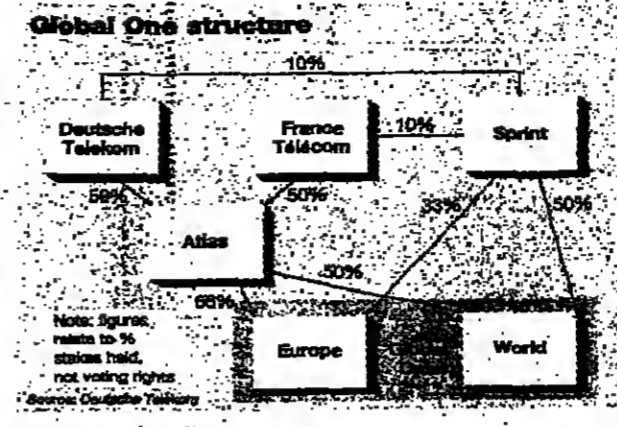
Getting used to the former may not be so difficult, given that France Télécom and Deutsche Telekom are both still state-owned operators which enjoy a virtual monopoly in their respective markets.

unfavorably with that at Concert, the global telecoms venture in which British Telecommunications has a 75 per cent stake.

international telecoms analyst claims, for instance, that MCI is bypassing Concert and selling network outsourcing on its own account in the US.

MCI has also created a Canadian subsidiary, SDH, which is partly competing with Concert and has been selling virtual private network or VPN services separately in France, he says.

market for another four years until 2000. The delay is likely to jeopardise Telefonica's full membership of Unisource.



Tony Dench, an analyst at the Yankee Group Europe, a telecoms consultancy.

Concert only its figures account only for services carried on Concert's network, while Global One's figures, it says, include all international telephony from the three partner companies.

cert, which was established in June 1994, said it had sales last year of \$400m and has sales "in the pipeline" worth another \$1bn.

While there is still uncertainty about the way the alliances calculate their revenues, Global One is readying for its first concerted advertising campaign this autumn.

WorldPartners by Richard Handford

Eight new countries targeted

As competition builds, winning is about having more carriers and offering more services

The WorldPartners Association, one of the three leading global carrier alliances, plans to sign up new partners and expand its range of services over the next 12 months as competition intensifies between itself and its two main rivals, Concert and Global One.

AT&T-led WorldPartners is talking to telecommunications carriers in up to eight countries, including China and India, about joining the association.

Like its competitors, it aims to be able to offer multinationals a single set of services of consistent quality across all its offices in different countries.

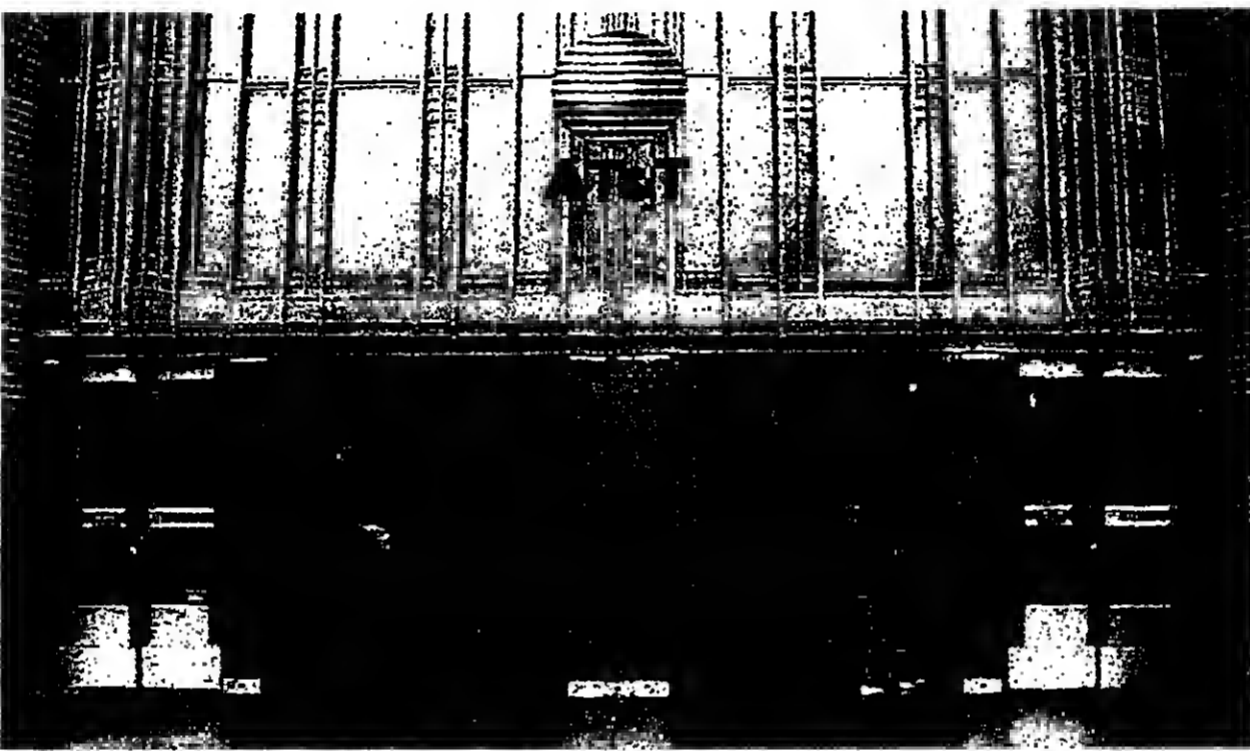
The venture was formed by US telecommunications giant AT&T in May 1993, when it joined forces with two other carriers, Singapore Telecom and Kokusai Denhin Denwa (KDD) of Japan.

Unisource and the three existing members of the venture, are its only equity investors. As well as selling its services, they also make the strategic decisions.

WorldPartners now has agreements with carriers in a further 12 countries. These partners sell its services but have no equity involvement in the venture.

WorldPartners develops all its own services but leaves the selling to the carriers.

Like its competitors, it aims to be able to offer multinationals a single set of services of consistent quality across all its offices in different countries.



AT&T's New York headquarters: the US group leads an alliance that is talking to telecoms carriers in up to eight countries

try. This alliance, set up in May, builds on the back of the partners' previous Unisource link-up for the European market, created in December 1994.

WorldPartners is unlikely to change its structure, according to Jim Pagus, AT&T vice-president for international strategy and alliances.

A frequent industry lobe refers to the complexity of WorldPartners' structure, particularly in Europe but Mr Pagus claims, "we are not the United Nations".

However, if other members of the association feel marginalised within the association's structure, they are less likely to be committed to selling its services.

Compared to its partnership structure, WorldPartners' portfolio of services appears simple. It offers a virtual private network voice service, private network data service and a frame relay service for higher speed data applications.

Over the next six months to a year it plans to broaden the range of data services on offer.

In addition, WorldPartners is considering whether to develop an Internet service that members could offer to customers. This could take the form of an Intranet service which would enable cor-

porations to enjoy the benefits of the Internet on their own private networks.

The Internet has arisen as one of the most important issues facing alliances of big telecommunications carriers.

Rival Concert announced in June that it was close to finishing construction of its own global Internet network.

WorldPartners currently has 225 customers, including Mastercard, Nomura Research and National Semiconductor. All of them were referred to the association by its members, many by AT&T in particular, which indicates the extent to which WorldPartners, like its rival ventures, is primarily a defensive strategy.

Once they choose to differentiate, that will reflect a more offensive approach, which is likely to be welcomed by most customers.

AT&T's Mr Pagus argues that WorldPartners has already done that in areas such as quality of service, but many users are sceptical about whether much difference exists between the alliances. "I have spoken to dozens of international companies and a strong theme emerges that these

alliances are seen as national monopolies becoming global cartels," said one leading industry consultant.

WorldPartners currently has 225 customers, including Mastercard, Nomura Research and National Semiconductor. All of them were referred to the association by its members, many by AT&T in particular, which indicates the extent to which WorldPartners, like its rival ventures, is primarily a defensive strategy.

Concert by Alan Cane

Stealing a march on its rivals

Clearance from the US and EU has given the BT-MCI link-up a big advantage

British Telecommunications and its US partner MCI announced earlier this year that they were close to completing the world's largest Internet network.

Involving the installation of at least 12 large switches in the US, Europe and the Asia Pacific region linked by high capacity fibre optic cables, the new network, to be launched later this year, will increase the capacity of the Internet by about a third, improving speed and efficiency for its users.

For most of them, private individuals or small companies, the advantages brought by what BT is calling "Internet Plus" will be their first experience of Concert, BT and MCI's global supercarrier.

Concert, a strategic alliance 75.1 per cent owned by BT and 24.9 per cent by MCI, will operate and manage the new network. Its chief objective has been to provide seamless, end-to-end communications for the world's multinational companies.

Concert has since secured a deal with a subsidiary of NTT, Japan's largest telecoms operator, for the distribution of Concert services in Asia Pacific.

The basic service provides for seamless voice and data links between countries together with a one-stop shop for installation, service and billing. It is available in 50 countries.

Its advanced features include the first VPN-based worldwide conferencing service and a calling card enabling customers to make low cost long-distance calls when away from the office.

According to Mr Axton, Concert's quality lies not in the ability to connect one network to another, a basic skill for telecoms operators but in the systems integration which makes possible seamless services and network management.

He reckons that Concert has a two-year lead on the opposition. However, such is the pace of change in international telecoms that it will have no time to rest on its laurels.

South Africa by Alice MacAndrew

Draft bill should set wires humming

Government is pushing through plans that include 4m new lines in five years

More than two years after coming to power, the South African government is finally taking steps to address the legacies of apartheid, which bequeathed the country deep disparities in the provision of telephone services.

In May, the government put new legislation before parliament which provides for the sale of a stake in the state-owned telecommunications carrier, Telkom, to an outside body. The draft legislation also prepares the ground for the installation over five years of 4m new lines. This will effectively double the number of lines across the country.

As the bill moves slowly through the parliamentary process, the ministry of posts and telecommunica-

tions has started negotiations with a number of foreign telecommunications operators and consortiums which are under consideration as possible strategic partners for Telkom.

The winning bidder will take a stake of between 20 and 30 per cent, at a price expected to range between \$1bn and \$2bn, and is expected to be announced by March 1997 when the draft bill is passed into law.

It is understood that a short list for the strategic partnership with Telkom has already been drawn up. One analyst predicts that the final list will include:

● A grouping of Deutsche Telekom and one other European operator (negotiations are still in progress);

● A consortium comprising SBC (formerly Southwestern Bell) Communications and Telecom Malaysia (regarded by some as being the best placed to be selected as the final winner);

● A grouping of Koninklijke PTT Nederland (KPN) and the Swedish operator Telia; and

● A consortium that includes either Bell Atlantic or AT&T.

The quicker the government moves to push through the necessary legislation to accommodate this, the better it will be for the telecoms network. The resources and expertise that the strategic partner to Telkom would invest in expanding and modernising the South African network are long overdue.

At present, the network is patchy and underfunded. In traditionally white areas there are an estimated 60 lines for every 100 inhabitants. But in black areas the average ratio is one in 100, with rural areas particularly badly served.

The provision of better telecommunications services is seen as central to South Africa's economic develop-

ment. The government recognises that an efficient and widespread telecoms network is essential to boost the global competitiveness of the country's economy, and regards the development of the telecommunications sector as a means of job and wealth creation.

With this in mind, the emphasis in the draft legislation is on the creation of a countrywide universal service by the year 2000, and not on the introduction of competition into the telecoms market. The government has no plans to introduce competition until its target of universal service has been achieved.

In this respect, South Africa differs from developed countries around the world which are channelling their energies into meeting World Trade Organisation targets for the global liberalisation of telecoms.

The starting date for deregulation of the sector in South Africa will depend entirely on the progress of

the sale of Telkom and the rate at which new lines are installed.

Meanwhile, the government has been negotiating with telecommunications equipment suppliers over the tender for contracts to install a million fixed lines across the country.

Five contractors were shortlisted and have submitted bids. They are Mariplex, the South African arm of NEC Equipment Leasing, the former telecommunications equipment arm of AT&T; Siemens of Germany; Alcatel of France; and Ericsson of Sweden.

The government says it could award up to three contracts for the work but it has not set a time for the decision.

There is, on the other hand, a time scale for the introduction of a regulatory body. The draft bill now before parliament will establish a new regulator - the South African Telecommunications Regulatory Authority (Satra) - by the start of

مكتبات الامارات

PROFILE Cable and Wireless's new chief executive

Brown ready to ring the changes at C&W

Key executives from the corners of the Cable and Wireless empire were in London this week to hear Richard Brown, the company's newly appointed chief executive, deliver his preliminary judgements on the group's progress and prospects.

Since his arrival on July 1, Mr Brown has spent little time behind his desk at the company's Theobalds Road, London, offices. He has been "logging up air miles, fighting off flu, weathering jet lag and trying to keep up with the work back at headquarters" while acquainting himself with what he describes as "the most global telecommunications company I know".

C&W, the UK's second largest telecoms company, made profits of £1.84bn on turnover of £5.5bn last year. It has interests in some 50 countries. Its UK subsidiaries are Mercury Communications and mobile operator Mercury One-2-One.

Mr Brown, born in New Jersey 49 years ago, and educated at Ohio University in the American mid-West, is well known in US telecoms circles, but something of an unknown quantity in Europe. Indeed, before Dr Brian Smith, C&W chairman, offered him the job, he was a stranger to the UK.

He took over in unusual circumstances. The former chairman and chief executive had both been forced out after an acrimonious boardroom row. Merger talks between C&W and British Telecommunications, which would have created one of the world's largest telecoms groups, had collapsed.

Analysts had become increasingly gloomy about C&W's prospects, pointing to its dependence for the bulk of its profits on its 57.5 per cent owned subsidiary, Hongkong Telecom, and its perceived lack of a coherent business strategy.

Much, therefore, is expected of Mr Brown. The contrast with his predecessor at C&W, James Ross, is marked. Mr Ross came from the oil business while Mr Brown has 27 years of experience of senior roles in the telecoms industry. Mr Ross is austere and cerebral while Mr Brown laughs

easily and often and favours sporting metaphors. Those who know him, however, say that his capacity for ruthlessness should not be underestimated.

Mr Ross favours consensus management, a style Mr Brown deplores: "I am bent more on action than strategy," he says sharply. "I understand the value of a strategic plan, but too many times people labour over the strategy to get it picture perfect, while failing on the execution. I admire intelligence but I believe the world has more smart people than effective people."

The pattern of Mr Brown's career suggests that he is both

demolished the barriers between local, long distance and international services.

His last job before joining C&W was chief executive of H&R Block, the largest US tax preparation company and owner of the on-line information service CompuServe.

An unusual departure for a telecoms executive, perhaps, but Mr Brown says he was excited by the challenge of running a large, publicly quoted company. "What really lured me was the fact that CompuServe was there, so I could dabble in the on-line services industry," he says.

What seems to have impressed Mr Brown most in his whistle-stop tour of C&W is the quality of its global assets. It has operations in western Europe, eastern Europe, the Asia Pacific region, the US and the Caribbean.

Many analysts expect Mr Brown to seek to put together a big deal - a merger or strategic alliance - within the next few months. He, of course, is giving no detail of his intentions, but the broad outlines are clear. He intends to focus on growth, efficiency and identity, the last because he thinks C&W's potential is a well kept secret. "We must do a better job of raising our profile."

The key, however, is revenue growth: "A healthy bottom line begins with the top line. The sustainable health of a business is dependent on recurring top-line growth. The trick will be to focus on turnover without sacrificing bottom line performance."

"Cable and Wireless is big enough to be successful as an independent but small enough to be nimble. I think the winners of the future in this industry will not be the bigger players but the better players. It will be the ones who can move quickly, the ones who are tuned into their markets, the ones who perform."

He is willing to discuss some of his immediate objectives. Where C&W decides to remain in a particular country, for example, he wants it to put down deeper roots, by which he means selling a multiplicity of products rather than single service.

'The winners of the future in this industry will not be the bigger players but the better players'

smart and effective. After leaving university, where he read both engineering and English, he joined Ohio Bell, a local telecoms company, working his way up through a variety of jobs on the services side.

In his thirties, he became vice-president, engineering, with United Telecommunications, a company which evolved into Sprint, the third largest US long-distance carrier. While at Sprint he first became acquainted with C&W through joint work on transatlantic cable routes.

He moved from Sprint to the role of chief executive at Illinois Bell, the largest subsidiary of Ameritech Corporation, one of the seven "Baby Bells" which provide local phone services in the US, and then to vice-chairman at Ameritech itself.

While at Ameritech he took a leading role in preparing the groundwork for the US Telecommunications Act, passed this year, which effectively



Richard Brown: 'Cable and Wireless is big enough to be successful as an independent but small enough to be nimble'

Lydia van der Meer

"If we are in mobile, we should consider what it takes to be in wireline and what it takes to be in data or video. Margins are better if you sell multiple services into a single market," he says.

C&W is one of the world's largest mobile operators, but he wants to see better integration between its fixed wire and mobile services. In the UK, that will

mean closer co-operation between Mercury and Mercury One-2-One. "No wireline company can be successful in the future if it does not have a wireless capability. The firms that divorce the two technologies are crippling themselves," he says.

He is keen to strengthen Mercury and to involve it more deeply in international activities, especially in mainland Europe.

Funding for the UK operator will rise but at the expense of other investments. "You should not expect to see any big surprises in our capital expenditure programme for at least the next 12 months," he says.

Mr Brown says his immediate priority is to ensure that the interests of C&W shareholders are protected during the transfer of power in Hong Kong from the

British to the Chinese government next year. "I have a great deal of confidence that can be arranged," he says.

"The only measure of business leadership success is how the shareholder benefits over time," he says. "My objective is to make the shareholder wealthy."

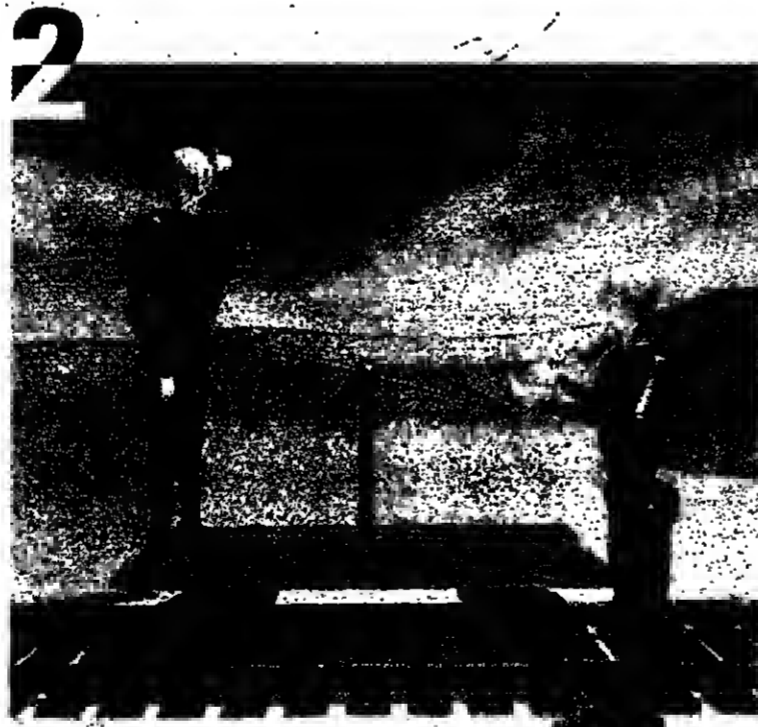
Alan Cane

SIEMENS NIXDORF



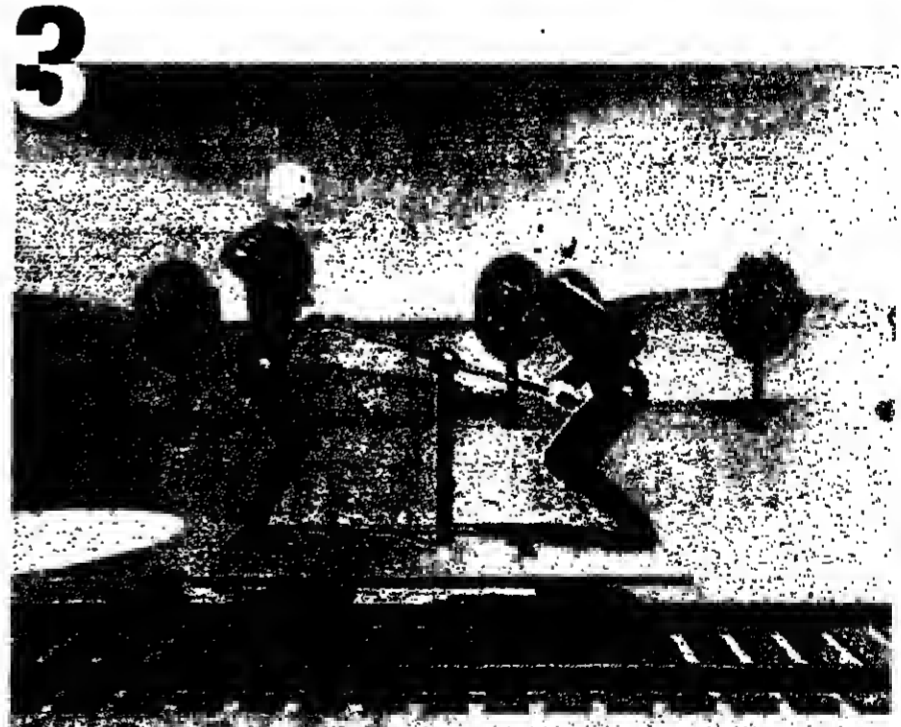
The challenge at hand

It is not unusual for an organisation to appreciate its goals but be unsure of exactly how to reach them. Faced with the option of more complex information technology and telecoms solutions, it is easy to see how a lack of focus can result. The task in hand can be daunting. To maximise your performance you need the expertise of a company that offers a unique blend of skills. Only Siemens Nixdorf Telecom has the knowledge vital to aid the development of your existing markets and deliver new services. We do this by supplying customised solutions which integrate with existing systems, in a practical and realistic way.



A joint endeavour

Siemens Nixdorf Telecom's single, most valuable asset is our people. They possess a wealth of expertise in information technology, telecoms and R&D - providing a service which is creative, innovative and fast. The ability of Siemens Nixdorf Telecom and our parent company Siemens to provide suppliers with the resources they need is unrivalled. It is the fusion of these two market winners that makes Siemens Nixdorf Telecom the only choice of ally in the carrier's fight for market share. We have harnessed the combined strengths required to provide genuine value added services and offer globally the reliability and security needed in a business partner.



Delivering together

Siemens is Europe's largest telecoms company and Siemens Nixdorf is its largest information technology provider. We have shared, and solved, the problems of the most successful organisations in the world. Combined, we are already helping major players provide the global services needed to supply their customers with products easier, faster and cheaper. We set ourselves the highest standards of customer care and support, to ensure your enterprise functions ever more efficiently. When the benefits come on line you will appreciate the critical difference that Siemens Nixdorf Telecom makes to hardware, software and the bottom line.



For more information contact:
Huw Hampson-Jones,
General Manager,
Siemens Nixdorf Telecom
Sumner House,
Oldbury, Bracknell,
Berkshire RG13 9FZ
Great Britain.
Tel: 01344-850211 Fax: 01344-850811

Siemens Nixdorf: User Centred Computing

مكتبة الامير

on

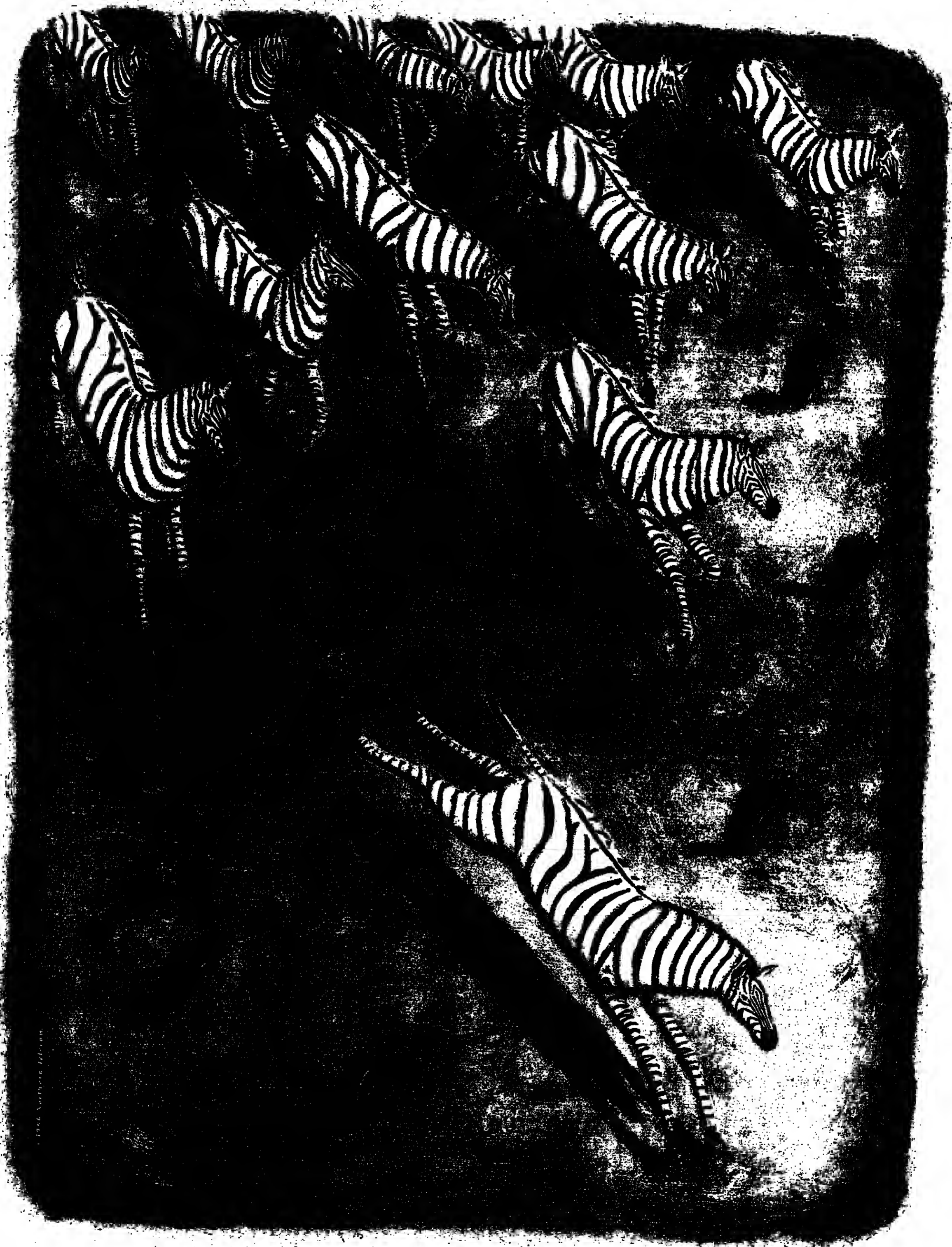
In case you hadn't noticed, the world is fast becoming digital. To make sure you don't get left behind talk to Nortel. You might be surprised to know we've designed, built and installed digital networks in over 100 countries worldwide. We also ensure they can evolve as quickly as your business. Because out there, it's the survival of the fittest.

Enterprise Networks • Wireless Networks • Broadband Networks • Public Carrier Networks

NORTEL
NORTHERN TELECOM
A World of Networks



ilator



To stay alive you have to stay ahead.

N. America call 1-800-4 NORTEL; Europe, Africa/Middle East fax +44 1628 812496; Asia/Pacific fax +852 2385 2196; Caribbean/Latin America fax +1 305 831 8390. Internet <http://www.nortel.com>.

Eastern Europe: by Kris Szaniawski

The state's grip loosens

Foreign interest is picking up as privatisation schemes get under way

Strong growth, stabilising economies and improving legal structures are raising investor confidence in central and eastern Europe. Foreign direct investment in the region exceeded \$11.5bn last year, nearly double the amount in 1994, according to European Bank for Reconstruction and Development estimates.

Much of that foreign investment is going into telecoms. This is not surprising as the average telephone density in eastern Europe is still only about 15 lines per 100 inhabitants, less than one-third of that in the European Union, and waiting lists for new phones often run into the millions. Hungary and the Czech Republic have led the way in the investment drive by selling stakes in their national operators.

Hungary became the first east European country to yield state control of its national telecoms operator

when it sold a majority stake in Matav last December. MagyarCom, a joint venture equally owned by Deutsche Telekom and Ameritech, paid about \$850m to the state privatisation agency for an additional 37 per cent of Matav, giving it a majority 67-per-cent holding. In late 1993 Deutsche Telekom and Ameritech had already paid \$975m for a 30 per cent stake in Matav. In the Czech Republic a 27 per cent stake in the national operator, SPT Telecom, has been awarded to a consortium led by TTI Netherlands at a cost of \$1.45bn.

Others are expected to follow. The Polish government announced this June that it would soon begin privatising the state-owned national carrier Telekomunikacja Polska (TPSA), probably starting with the sale of a minority stake next year. It is thought likely that the government will opt for a flotation of TPSA in combination with the sale of a stake to a strategic investor.

In Hungary and the Czech Republic, stakes in the national operators were sold solely to strategic investors, but the political climate in Poland is not thought to favour the sale of a significant stake in a strategic Polish company to a foreign owner.

The administrations in Bulgaria, Slovakia and Slovenia have also recently announced plans to sell off minority stakes in their telecoms operators, although it is not clear how much these are being driven by a need for cash and how much by a desire to implement a more liberal telecoms strategy.

While the growth potential in the fixed-line and cellular telephony sectors remains large, the problems of tapping this potential are significant.



Leading the way: the Czech Republic has been among the first to sell stakes in its national operator

with Ericsson in July for the implementation of large scale fixed radio access networks based on the advanced Digital European Cordless Telecommunications standard.

These independent operators are committed to increasing their line totals by almost 20 per cent a year and so have turned to radio access technology for a quick solution.

According to telecoms consultants CIT, one of the biggest risks for outside investors in eastern Europe is the unpredictable behaviour of governments and state-owned telecoms operators.

For example, France Télécom and Ameritech are still seeking compensation from the Polish government after missing out on a GSM licence earlier in the year.

Attracting capital through joint ventures is an alternative to privatisation, although joint ventures have tended to be confined to projects targeted at the business community, such as digital overlay networks, satellite links and mobile services.

Western financial institutions have been ready to fund these kinds of value-added services because of the relatively quick returns that can be made on them.

Cellular joint ventures are plentiful across the region, contributing to that sector's

rapid expansion. According to FT Mobile Communications estimates, the number of cellular subscribers in eastern Europe grew by over 88 per cent during 1995, by comparison to about 59 per cent in western Europe. The number of subscribers now stands at about 750,000.

Average penetration levels are still low by western standards but are rising fast - Hungary now has more cellular telephone users per head than does Belgium.

Users are expected to expand rapidly as more licences are granted. Most east European countries now have a cellular network based on the NMT-450 analogue standard, but a rash of more advanced GSM digital standard licences are being awarded to stimulate competition and boost service quality.

Whereas two years ago there were practically no digital cellular systems in the region, there are now 10 GSM networks in operation. Since the beginning of the year two GSM licences have been awarded in Poland and two in the Czech Republic and further GSM licence awards will soon be announced in Romania and the Slovak Republic. A second wave of digital licences based on the DCS-1800 standard is also anticipated in the near future.

National operator	Turnover (\$m)	Pre-tax profits (\$m)	Number of main lines	Main lines per employee	Year
1. Telekom Polska	2124.48	361.07	5,727,697	78.29	1995
2. SPT Telecom	998.51	289.46	2,490,000	62.03	1995
3. Matav	941.00	2.12	1,892,891	108.42	1995
4. HPT Croatia	848.47	99.81	1,146,000	68.21	1994
5. Telekomunikacja Polska	847.08	100.77			1994
6. Rom Telekom	512.27	15.74	2,805,000	85.93	1994
7. Telekom Slovenija	307.00	23.00			1994
8. Slovak Telekom	298.23	118.50	1,116,000	72.75	1994
9. BTC	188.26	46.90	2,487,000	85.54	1994
10. Lantelinkom	118.24	8.00	784,000	108.14	1994
11. Lietuvos Telekomas	111.25	25.00	941,000	94.48	1995
12. Eastel Telefon	70.94	6.85	471,000	100.54	1995
BT	22,052.00	4,228.00	27,070,000	198.80	1994/95

France: by David Owen

Flagship's new course

Sweeping change is on the way following the passage of two liberalising laws

The passage of two new laws has made 1996 a landmark year for telecoms in France. One allowed for the conversion of France Télécom from an arm of the state administration into a joint stock company, paving the way for the sale early next year of a first batch of the telephone operator's shares. The other set out a new regulatory framework for the country's FFr117bn (£14.81bn) telecoms market, which - like other EU markets - is to be opened to competition in 1998.

"This date will mark an unprecedented opening of the telecommunications market," says Jean-Marie Messier, chairman and chief executive of Compagnie Générale des Eaux, which hopes to use the new regime to branch out into fixed telecoms markets. "In a single step, the 90 per cent of the market that is inaccessible today will be opened to competition."

The France Télécom reform was expected to trigger hostile reaction from trade unions, worried about the effect of partial privatisation on jobs. But their protest faded in the face of government assurances that the company would continue to give its employees civil servant status, with accompanying job security rights, until 2002.

As it turned out, the government had more trouble from the opposition Socialists and Communists, who fought the plan vigorously, submitting 300 amendments and forcing prime minister Alain Juppé to resort to a special parliamentary "guillotine" procedure to push the bill enshrining it through the lower house.

The reform, under which France Télécom is due to be incorporated on January 1 1997, should enable the group to seal strategic alliances and strengthen its competitive position. It should also enable it to raise funds for the massive investments required in the developing markets of telecoms and multimedia.

The government has promised to retain a 51 per cent stake in the world's fourth-largest telecoms operator in terms of 1994 turnover, with up to a further 10 per cent reserved for employees.

BZW, the UK investment bank, recently valued the group, which last year made net profits of FFr9.2bn on sales of FFr147.9bn, at FFr147bn. It said the company scored well on "simple efficiency measures", such as lines per employee and labour efficiency.

It said the group had high penetration, with 56 lines per 100 population, and a fully digitalised network. Future expenditure could be "geared towards expanding the range of services and increasing line usage".

work requires the establishment of an independent regulatory authority, to be set up from January 1 1997. This body will supervise rules fixed by the government, which will retain the right to licence new operators from January 1 1998, when complete liberalisation takes effect. The reform makes France Télécom responsible in the first instance for a universal service, defined as providing an affordable national service with no price discrimination based on geography. Much of the detail remains to be worked out, however. The level of interconnection charges for new operators could be a bone of contention.

The government has spelt out five guiding principles behind its reforms:

- Guaranteeing a quality public service for everyone;
- Guaranteeing users simple access to more services;
- Creating an environment favourable to the development of competition;
- Developing France Télécom's competitiveness and
- Ensuring fair competition through the creation of an effective regulator.

Ministers also hope that more jobs and cheaper calls will result from the advent of competition. Indeed France Télécom has already implemented two rounds of price cuts this year. François Fillon, telecommunications minister, recently suggested further reductions in tariffs would be made before 1998.

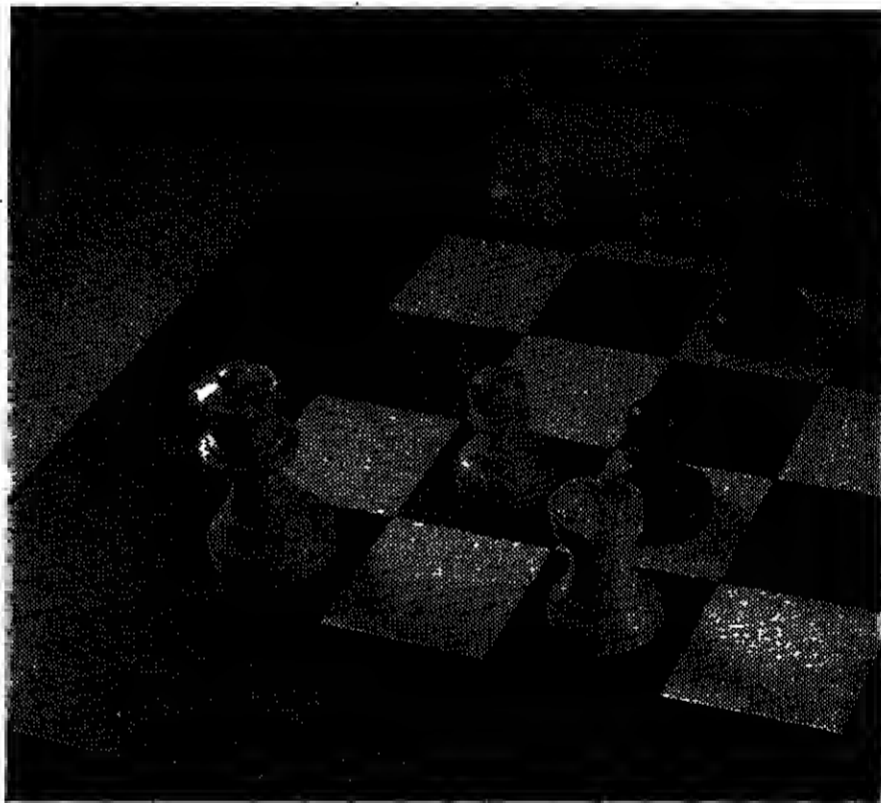
Competition has already started to creep into certain segments of the French market. In May, MFS Communications, a US-based telecoms company, announced the link-up of its first corporate client to a 20km optic fibre network in the Paris sewers.

Competition is also entrenched in the buoyant mobile market, where the two established operators - France Télécom and Générale des Eaux - were this year joined by Bouygues, better known for its construction activities and interest in the TFI TV channel.

At just over 1.8m at the end of July, the number of mobile subscribers is still low in France compared with other western European markets, partly because phones tend to be viewed as business tools, with services priced and packaged accordingly.

Bouygues' arrival on May 30 with a network that operates at the 1,800MHz frequency range until recently reserved for the French defence ministry looks set to change all that. The company has described its market as "the general public", something that has been reflected in its early promotional campaign - expected to cost FFr65m between June and September and has featured the slogan "Using the telephone is becoming a sixth sense" - and in the price at which its service is being pitched. By end-July, the new network had clocked up more than 22,000 subscribers.

Several Moves Ahead



Ricoh thinks and plans ahead. Always one move ahead of the rest, Ricoh is the Grandmaster in office automation and the way to avoid checkmate. Ricoh offers strategic solutions: digital colour copiers that provide you with extensive copying and printing possibilities, multifunctional digital combination units that print, copy and fax and network equipment that increases the digital connectivity. In short, Ricoh can help give you the edge and ensure that you stay several moves ahead. Ricoh - your masterstroke.

RICOH's Digital Solutions Office Automation



Ricoh Europe B.V.
Groenelaan 3, P.O. Box 114
1180 AC Amstelveen, The Netherlands
Tel: +31-20-5474111
Fax: +31-20-5474154

Ricoh Business Machines Ltd.
23/F., China Overseas Building
139 Hennessy Road, Wan Chai, Hong Kong
Tel: +852-2682-2888
Fax: +852-2866-1120

Ricoh Co., Ltd.
15-5, Minami-Aoyama, 1-chome
Minato-ku, Tokyo 107, Japan
Tel: +81-3-3479-3111
Fax: +81-3-3403-1578

Ricoh Corporation
5 Dedrick Place, West Caldwell
New Jersey 07006, U.S.A.
Tel: +1-201-882-2000
Fax: +1-201-873-6934

8 INTERNATIONAL TELECOMMUNICATIONS: JAPAN AND TAIWAN

Japan by Michio Nakamoto

Technologies lead the way

While the sector trails others overall, mobile telephony has leapt ahead

In the past few years, deregulation and new technologies have supported the emergence of telecoms as one of the fastest-growing sectors of the Japanese economy.

The country's telecoms industry still trails behind the electric machinery, vehicles and electric power industries in terms of overall sales by type one carriers - operators that own their own network infrastructure. Sales amounted to ¥9,000bn in the year to March 1996, according to the Ministry of Posts and Telecommunications.

However, overall planned

investment by type one carriers showed the strongest growth among all industries in the last fiscal year to March 1996, climbing 27.8 per cent to ¥3,480bn, the ministry points out.

In particular, the mobile communications market has seen rapid growth in subscribers since deregulation was introduced and helped to reduce prices significantly.

Japan's mobile communications market grew 71 per cent to ¥2,400bn in the fiscal year to March 1996, according to the Ministry of Posts and Telecommunications. Japan is now the second largest mobile phone market after the US with 15m subscribers at the end of April this year - an increase of 81 per cent over a year ago.

Personal handy phones, which are a cheaper form of cellular phone, have also

spread rapidly, with subscriptions reaching 2m in the first 10 months after services were started.

The use of mobile communications tools is so widespread that it has become a social issue in Japan where the use of phones in public places such as on trains, in hotel lobbies and restaurants, is frowned upon. What is more worrisome, the Japanese police found that up to three quarters of the accidents that were reported in June occurred while the driver was trying to make or receive a phone call.

Such concerns, however, are hardly expected to halt the growth of the mobile communications market. This fiscal year, the telecoms ministry expects the market to grow a further 48 per cent to ¥3,500bn.

While the mobile market has shown spectacular growth, the fixed line market has been hampered by a lack of competition despite extensive deregulation measures introduced 10 years ago.

In particular, the lack of access rules in a market where the former national carrier, NTT, provides both local and long-distance services and dominates the local market, has prevented long-distance carriers from competing effectively.

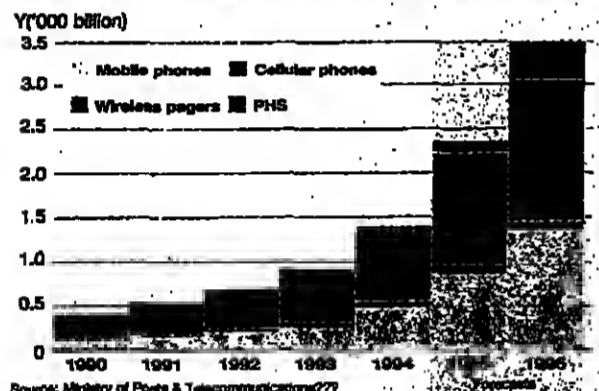
NTT has been able to charge its long-distance competitors high rates for access to its local network, a factor which has led to the high cost of long-distance tele-



While the mobile market has shown spectacular growth, the fixed line sector has been hampered by a lack of competition

Oyo Goro

Growth in mobile communications in Japan



Source: Ministry of Posts & Telecommunications/777

phony and other services in Japan. As a result, the cost of telecommunications in Japan has been kept high, many services have been kept from growing and "the average spend per head in the US (telecoms market) is 50 per cent higher than in Japan," points out Barry Dargan, industry analyst at SBC Warburg.

Before the end of this fiscal year in March, however, the government is expected to take a number of measures which will go a long way towards resolving outstanding issues.

First, the government will draw up access rules based on the recommendation of an advisory panel which is due to be finalised next spring.

The difficulty NTT's competitors have had in competing successfully with the dominant carrier has stemmed to a large extent

from a lack of fair access to NTT's local network.

Long-distance carriers have had to pay out close to half their revenues in excess charges to NTT.

Tokyo Telecommunication Network, a regional phone company operating in the Tokyo area, has not been able to grow its business due to its lack of the final link

into customers' homes, which is dominated by NTT. Although TTNet has an extensive network linking long-distance and local switches, without the connection to homes, either the company or subscribers were obliged to pay the cost of laying that line, which is prohibitively expensive and wasteful. NTT, meanwhile, had shown little interest in providing TTNet with the required link.

Under the threat of divestment, NTT itself declared a policy of providing open access to its network, last autumn.

TTNet plans to take advantage of this new policy and, in early 1998, start to provide local and long-distance phone services at rates lower than those currently charged by other operators.

Long-distance and international call services will be offered by tying up with long-distance and international carriers. Kazuo Fujimori, president of TTNet, was quoted last year as saying that with access to NTT's network, the company can aim to win 4m users, or 20 per cent of the Tokyo regional market in the next

10 years.

However, the telecoms ministry believes NTT's stated policy will need more than the company's own private initiative to be effective.

By drawing up access rules, "we are trying to create a framework for NTT to provide open access to its [local] network that would include an incentive for, or some form of pressure on the company, to do so at low rates", says Eishi Tanaka, a senior adviser to the telecoms ministry.

Secondly, the government plans to deregulate the leased line market to allow each end of privately leased lines to be connected to the public network.

Deregulation of the domestic leased line market could take place as early as this autumn, making it possible for companies that do not have their own lines to provide telephony services to a general public.

At the same time, the government is working towards bringing forward deregulation of the international leased line market, which is expected to have a tremendous impact on competition in that market.

By next spring, the telecoms ministry is also expected to remove barriers separating long-distance and international business, following removal of the boundary between local and long-distance markets.

The ministry plans to ask for a revision of the KDD law to allow the international carrier into the domestic market. Until now,

Japan has been unique among industrialised countries in separating the international and domestic telecoms businesses.

The removal of that distinction is likely to prompt alliances, if not outright mergers, between international carriers, such as KDD, and long-distance carriers, such as Japan Telecom, which in turn will help to realise lower rates, says Mr Dargan.

By the end of the year, a government decision is also expected on the status of NTT. This is a major issue that has been left undecided in spite of the recommendation by a government advisory panel that NTT should be broken up into a long-distance company and local carriers to stimulate competition.

As these decisions take shape, they are expected to usher in important changes to Japan's telecoms industry. A decision on NTT's status, for example, will give foreign carriers looking for a Japanese partner a more solid basis upon which to base their decisions. Japanese carriers that do not know what kind of carrier they will be competing with in a few years time will have a better idea of their competitive environment.

Japanese carriers will also have a clearer idea of their priorities concerning overseas markets and alliances at home. The next few months will be crucial in laying the foundations for an extensive restructuring of Japan's telecoms industry.

Heather charms
hundreds of men
every day

Taiwan: by Kris Szaniawski

Asian tiger sharpens its claws

Partly as a result of international pressure, the state is liberalising its telecoms industry

Having lagged behind its neighbours in recent years, Taiwan took a big step forward at the beginning of this year by legislating to open up its telecoms market. In a bid to extend its position as a regional business hub Taiwan is putting the finishing touches to a series of tenders which will deregulate telecoms in this tiger economy.

The monopoly on switched voice traffic will probably remain in place until 1998 but the liberalisation of other fixed traffic markets, such as data, is expected by the middle of next year and all mobile services are in the process of being deregulated.

Foreign investors are lining up to bid for a total of eight new cellular licences, eight paging licences and up to 30 licences for other wireless services. In this feeding frenzy the cellular licences are attracting the greatest interest.

The tender details have yet to be finalised. In the latest development, the Taiwanese government bowed to lobbying from Washington by deciding to raise the threshold of foreign ownership in domestic telecoms ventures to 49 per cent rather than the 20 per cent that it had proposed in May. The Taiwanese are open to

pressure as they are dependent on US backing in their bid to join the World Trade Organisation.

Powerful US companies which are among the foreign companies planning to bid for the lucrative digital cellular licences - such as AT&T, AirTouch, South Western Bell, Sprint and Nynex - are also lobbying their government to exert pressure on the Taiwanese authorities to drop the 11.5 per cent profits ceiling that it proposes to impose on all telecoms joint ventures.

The foreign ownership barrier may in any case prove not to be a limitation as the Taiwanese government has suggested that it will give it as favourable an interpretation as possible by extending the definition of what constitutes a local company.

Although Taiwanese investors will still dominate the various consortia bidding for cellular licences the new telecoms market will be far from the state-owned telecoms monopoly that existed until recently.

With cellular penetration currently standing at a mere 3.5 per cent by comparison with about 12 per cent in Hong Kong, the Taiwanese have a lot of catching up to do with equivalent economies. With a per capita gross domestic product of about \$2,000, Taiwan has a cellular penetration lower than Malaysia's, which has a per capita GDP of only about \$4,000.

The waiting list for the current GSM cellular service

operated by the FTT may be as high as 400,000, illustrating the extent of pent-up demand and the opportunities awaiting new operators.

Expansion has been held back by slow infrastructure roll-out and inadequate capacity.

As the national operator had attracted 170,000 customers by the beginning of this year to a GSM network that was only launched in early 1995, and is currently attracting as many as 40,000 net new GSM subscribers each month, this would suggest that customers are out there for the taking.

The total cellular market - including analogue subscribers - was about 770,000 strong at the beginning of the year and some analysts expect to grow to 4m by the end of the decade.

The government has chosen the GSM and DCS-1800 European-originated digital technologies for the eight cellular licences. Three regional GSM and three regional DCS-1800 licences will be awarded possibly before the end of the year, as well as one or two national DCS-1800 licences. It is not yet clear if one of the national DCS-1800 licences will go to the state-run national operator.

The state-run national operator, Directorate General of Telecommunications, is being restructured as the corporate Chung Hwa Telecommunications, probably as the first step towards selling bits off to outside investors.

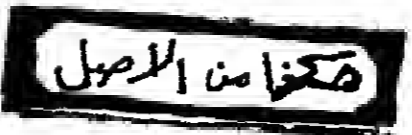
0500 666 123

E-mail: jessmy.taylor@scotland.co.uk
WWW: http://www.scotland.co.ukLOCATE IN SCOTLAND
It's the people that make Scotland work

Locata In Scotland. London Office, 17/19 Cookspur Street, London SW17 5BL. Munich Office, Amulfstrasse 27, 80335 München, Germany. Telephone 089 59047 130.

مكتبة الامير

INTERNATIONAL TELECOMMUNICATIONS: THE DEVELOPING WORLD 9



Tomorrow he'll be using a mobile: demand is such that the authorities are considering shifting development from fixed-line networks towards cellular networks South Africa

India: by Eden Zoller

Rich returns for patient investors

Despite its potential, red tape and swings in policy deter many operators

Pradesh West and West Bengal. Class C licence areas are Assam, Bihar, Himachal Pradesh, the North East and Orissa. Bids have been placed in all areas except the Andaman and Nicobar Islands and the conflict-ridden state of Jammu and Kashmir.

Foreign companies have been allowed to enter the market via joint ventures in which they can hold up to 49 per cent. Tenders attracted US and European heavyweights including Stet of Italy, Swiss PTT Telecom, Bell Canada, Nynex, US West, Moscow Telecom and Bezeq of Israel.

However, the tender process was thrown into disarray last November when, after the first round of bidding was completed, the government abruptly announced that it would place a cap on the number of licences any one operator could hold.

A single operator can only hold three licences in the grade A and B circles, although there is no limit on the less attractive C circles.

On the cellular side, the US West-BPL and the Modicom alliance were forced to give up some of the licences for which they were originally in line.

The cap caused an outcry among bidders and provoked the opposition party to accuse the government of imposing the limit to prevent one of the bidders from making a mockery of its policy of using private investors to fuel the development of basic services.

The bidder in question was the alliance of local group Himachal Futuristic Communications Limited (HFCL) and Israeli national carrier Bezeq. The HFCL-Bezeq alliance bid much higher than any of its rivals and was in line to scoop up nine of the 21 licences for basic services. HFCL-Bezeq bid \$26.58bn for the nine licences, and there was concern that the group would be unable to fund the development of services in all nine franchisees. A failure of this sort would have been embarrassing for the government, robbing local people of the services they had been promised.

The cellular licences for the 18 zones where bids were placed was settled in January, but the award of the licences for fixed-line services was not resolved until the spring. The tender for basic services was not only hit by the imposition of a

China: by Tony Walker

The bamboo superhighway

Beijing plans to spend much of its telecoms budget on laying fibre optic cable

Extraordinary growth in cellular mobile phone ownership in China is just one aspect of an explosion in the telecommunications sector which includes the spread of telephone services, availability of cable, plans for an information superhighway and increasing resort to use of satellite communications.

Under China's Ninth Five Year Plan (1996-2000) the country plans to spend Yn500bn (\$61.7bn) on its telecoms by 2000, about two-thirds of which will go to building exchanges and laying 300,000km of fibre optic cable. The Chinese have set themselves the ambitious target of adding 64m new subscribers to the present 41m. Exchanges capacity would double to 170m lines.

As part of the plan, telephone density rates will rise from 4.66 per 100 people at the end of 1995 to 10.5. In the cities, the figure will increase from the present 13 sets per 100 to between 30-40. That rate of increase for a country with a population of 1.2bn would involve adding the equivalent of half the number of UK lines each year to China's capacity.

Wu Jichuan, minister of posts and telecommunications, said recently that investment in China's telecoms would continue to grow at a rate of about 40 per cent annually to the year 2000 - an extraordinarily high growth rate by any standards.

Plans involve constructing eight horizontal and eight vertical trunk lines covering the whole country. Extension of telecommunications

services to remote areas in China's hinterland has become a priority under the latest five year plan which aims to redress development imbalances between regions.

Funding for this ambitious programme will come equally from installation fees for the 15m new lines added annually from high rates of depreciation on the MPT's assets which total about Yn250bn and from loans.

These include commercial banks loans, assistance from international lending institutions such as the World Bank and credit guarantee-type funding through institutions such as the Export Credits Guarantee Department, the UK credit agency, Coface of France and Hermes of Germany.

Mr Wu defended China's decision to exclude, for the time being, foreign companies from involvement in the actual operations of China's telecommunications system, saying conditions were not yet right. But he hoped that by 2020 the Asian Pacific Economic Co-operation (APEC) forum target of open telecommunications throughout the region could be met.

"In China we are trying our best to make conditions right so that foreigners can take part in operations of telecommunications. We'll do our best to make conditions right to comply with APEC," he said.

Mr Wu said one of the constraints on foreign participation was the fact that foreigners would only be interested in the eastern areas where demand was concentrated, and would have little interest in the sparsely-populated western regions.

But he added that foreigners were not prevented from being involved in the actual

construction of networks "in ways acceptable to both sides". Foreign companies were not precluded from equity investment in such ventures with a "fixed rate of return".

One area which has been eyed covetously by international telecoms giants is the cellular phone sector. This is not surprising given the extremely rapid spread of mobile phones. The official China Daily reported recently that China Telecom, a subsidiary of the ministry of posts and telecommunications, was poised to become the world's largest mobile phone operator within a year.

At the end of 1995 China Telecom had 5.6m customers. By June, that number had risen to 5.1m, and is expected to reach 7m by the end of the year. At that point, China Telecom will have passed AT&T which presently has most subscribers.

Indeed, such is demand for cellular phones that the authorities are considering

shifting emphasis from developing urban fixed line telephone networks to expanding the mobile network instead.

Foreign companies, including Motorola of the US, Nokia of Finland and Ericsson of Sweden are producing mobile phones in China. Motorola plans to invest \$2bn by the year 2000, producing communications equipment, including cellular phones and pagers. The number of pagers in use in China reached some 20m at the end of last year, making China the world's largest pager market.

China is also looking well beyond 2000. The MPT is forecasting that by the year 2010, 420m lines would be available, more than double numbers at the end of the century. In addition, a "broadband integrated digital network" would be in place to provide interactive multimedia services in the cities and coastal regions - China's version of the superhighway.

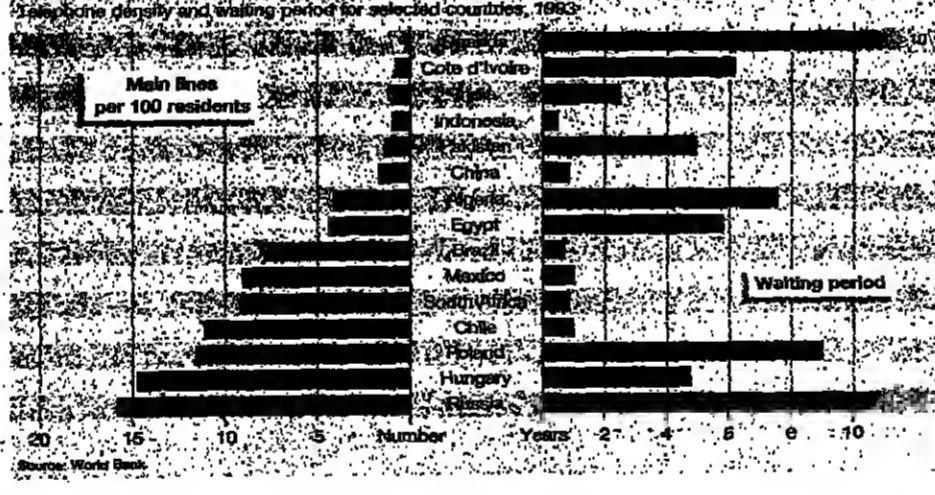
China is now constructing

what it describes as its "Three Golden" projects, consisting of the Golden Bridge, Golden Customs and Golden Card. The Golden Bridge scheme will provide "superhighway" communications between ministries, state organisations and companies; the Golden Customs project will upgrade radically customs service communications to facilitate clearance of goods; and the Golden Card project is aimed at developing China's credit and debit card systems.

China is also plunging heavily into the development of its cable networks. In 1990, the country's subscribers to cable totalled 13m households. At the end of July this year numbers of subscribers had swelled to 46m out of a television-owning population of about 250m households.

By 2000 that figure is expected to reach 80m, making China easily the biggest cable television market in the world. In China's telecommunications sector the sky, it seems, is the limit.

Telecommunications coverage varies widely in developing countries



Pakistan: by Farhan Bokhari

Giving out mixed signals

The market's prospects have been dogged by delays in selling state-run PTCL

Two contrasting images define Pakistan's telecom sector. One is the vision of a huge market with opportunities for expansion. But this optimistic picture is set against growing concerns over the country's failed efforts to begin the privatisation of the Pakistan Telecommunications Corporation (PTCL), the monopoly telephone company, since the government first decided to privatise it more than four years ago.

The delay has been caused by a variety of reasons including security concerns, pricing of the company and political uncertainty which has dampened investor interest. Many potential investors, therefore, may have a good reason to believe that Pakistan is in no rush to privatise the sector and open it up to foreign or domestic investment.

The initial two-year delay was caused by objections from the country's defence forces who argued that the takeover of the PTCL by a private management would harm security interests.

The government subsequently gave assurances

that part of the money raised from the sale would be used to set up an alternative "secure" telephone network for the use of government and defence officials. However, despite such assurances, worries continued and were added to by concerns the sale of PTCL would not raise enough money.

More recently, worsening political and economic trends in Pakistan have added to anxieties among officials and businessmen, many of whom believe plans to privatise the PTCL may suffer further delay.

"You have growing anxieties over the political future of prime minister Benazir Bhutto's government and you have worries over the country's economic trends. The combination of these two may hurt the chances of PTCL's privatisation," says a senior western economist in Islamabad.

In recent weeks, however, many officials have drawn comfort from reports that a newly emerging Dutch-Indonesian-Pakistan consortium may enter the race and offer up to \$2bn for 26 per cent of the company's shares. The government wants to sell the 26 per cent stock to an individual private investor or a consortium along with a transfer of the company's management.

The government's privatisation commission in Islamabad

announced that Setia-awan Djody, chairman of Stecco group of Indonesia, J.B. Volbeda, president of PTT Telecom Netherlands, and representatives of Shaheen foundation, a newly emerging Pakistani business group, verbally expressed interest in bidding for PTCL after discussions with government officials.

In a separate announcement, Shaheen foundation said the consortium could offer up to \$2bn to buy the 26 per cent shares. That announcement helped to remove some of the anxiety triggered by earlier reports that AT&T had decided not to put in an offer after reviewing PTCL's performance and growth prospects.

This July, PTCL announced that its annual revenues for the year to July 1995-June 1996 had exceeded a target of Rs35bn (\$978m), but did not indicate by what margin.

The company has set itself an ambitious revenue target of Rs44bn for the current fiscal year ending in June next year. The company has so far not given a figure for its pre-tax profits for the last fiscal year though many analysts say that it would be 7 to 12 per cent higher than the previous year when pre-tax profits were Rs16.635bn.

Prospective investors have been promised measures

which would ensure continued profits. The contract for the 26 per cent share privatisation would include clauses committing a seven-year monopoly on rights to provide basic telephone services in Pakistan as well as a 25-year renewable licence to provide a full range of telephone services.

The company also says that its prospects for growth remain attractive. PTCL has so far provided connections to 2.48m subscribers and still has capacity to serve another 670,000. Recent expansion in PTCL's capacity has raised the average availability of telephones to Pakistani subscribers to 1.78 phones per 100 people up from fewer than 1 per 100 in 1992.

The company has also recently taken steps to modernise its services, with moves such as the introduction of on-line Internet access for subscribers and a facility allowing companies to connect to national nine-digit universal access numbers, similar to the 800 service in North America.

Some analysts are positive on PTCL's growth prospects. Aaliya Dossa, analyst at Crosby securities' offices in Karachi says: "In such a large country where there is growing demand, you'll see the PTCL making more money in the future".

Nasir Bukhari, head of

Karachi's Khadim All Shah Bukhari and company, a large brokerage firm says: "In spite of the uncertainty, PTCL's privatisation is bound to get going in the next few months." However, he adds, the pricing may remain an issue because prospective buyers are likely to make bids which are lower than those envisaged by the government. The government has so far not announced how much it wants for the 26 per cent share.

Many other analysts say conditions in Pakistan's leading stock market in Karachi may be crucial to the PTCL's future. Ten per cent of the PTCL's shares were placed on the markets in Pakistan and overseas, two years ago, when the government decided to sell part of the company's equity prior to a takeover by a private management.

The share prices have fallen by more than 40 per cent from their peak, largely due to political and economic uncertainty in Pakistan, which has pushed down the stock market's index.

Many analysts say that a dispute over the pricing may be triggered if prospective buyers use current share prices to assess the value of the stake while the government may expect to sell those shares at a higher price.



Low penetration: with a population of almost 1bn, India has only 12.9m installed lines Tony Anderson



invented
telephone.

(ALSO transistor, laser, Telstar satellite,
fibre-optic cable, cellular).

Have won awards. (Nobel etc)

Specialise in making things that make
communications work. Will do same for you.

Contact Lucent Technologies

(the former network systems,

business communications systems and

microelectronics divisions of AT&T, plus Bell Labs).

Call our European Response Centre on

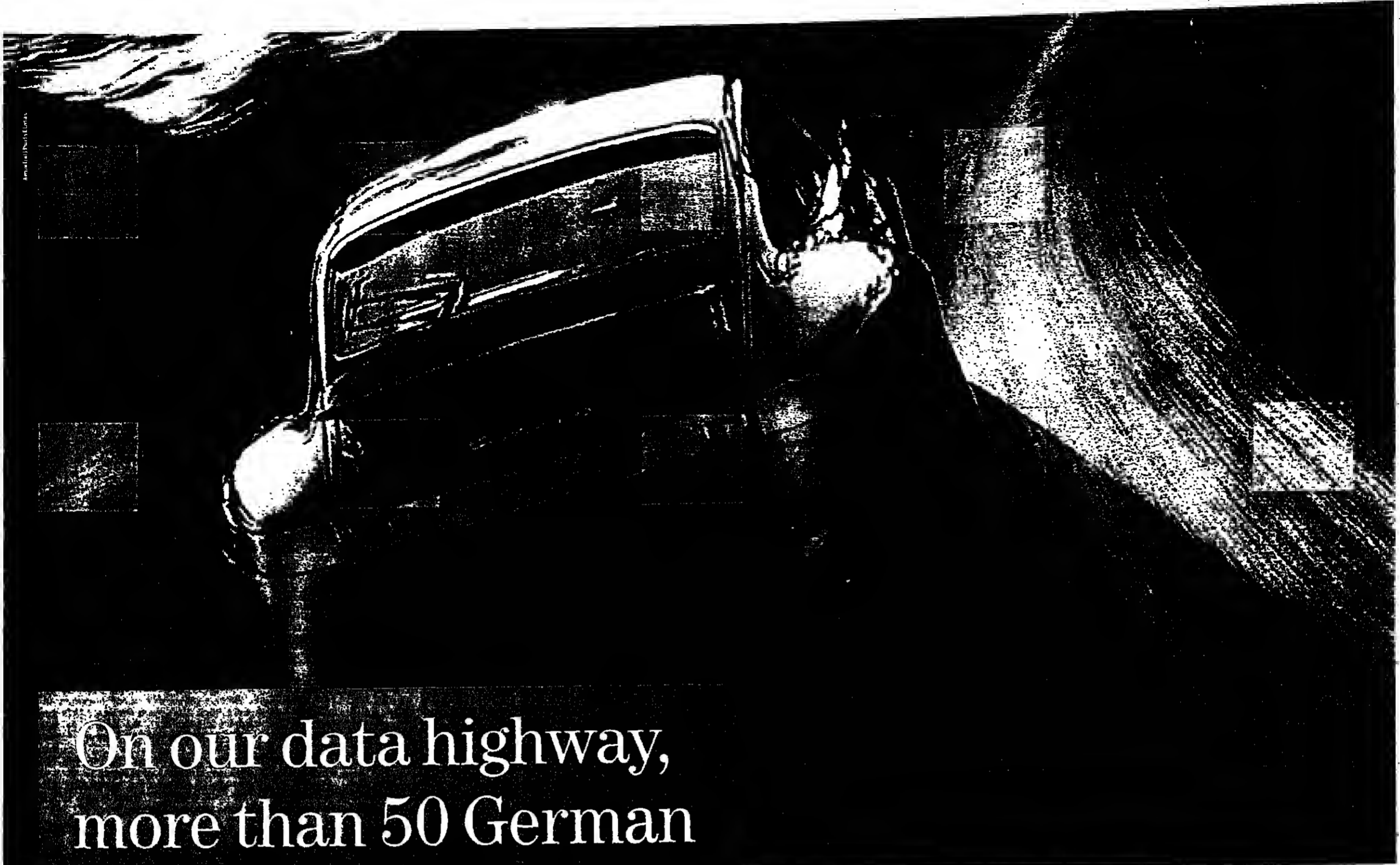
+44 1734 324 255. Or explore Lucent Technologies

on the World Wide Web at <http://www.lucent.com>

Lucent Technologies
Bell Labs Innovations

Europe, Middle East & Africa
Tel. +44 1734 324 255

We make the things that make communications work.



On our data highway,
more than 50 German
companies are
as fast as Porsche.



Deutsche Telekom has the world's most advanced information highways, especially in high-speed communications. They're designed to provide Porsche and other companies with turbocharged performance.

The Porsche is one of the world's fastest cars. In terms of data-transfer, Porsche AG is one of the world's fastest companies. It was one of the first companies to employ Datex M, Deutsche Telekom's first standardised asynchronous transfer mode (ATM) service. And now there are over 50 other firms in Germany which are working successfully with this high-speed data-transfer service.

Creation and Innovation. Porsche moves faster on Deutsche Telekom's information highways.
Through multimedia, Porsche designers can work interactively and internationally via the information highway with colleagues and other specialists to exchange ideas and develop new products. In this way data transfer, for example of computer simulations to optimise crash behaviour, is decisively speeded up. With development times significantly shortened. In the next few years, Porsche suppliers will also be networked, ensuring that the complex interchange of information in the development and production of new cars runs with increasing efficiency and speed.

A Deutsche Telekom innovation could get you moving faster.
On the information highway, Deutsche Telekom's T-Net is out in front. It includes, for example, the world's most comprehensive optical-fibre network and more ISDN lines than any other country on earth. Other fields in which we are active include ultra-modern international network infrastructures such as undersea cables and satellites. Thanks to Global One, our worldwide partnership with France Télécom and the US company Sprint, we can operate on behalf of our customers on a worldwide basis. And with the kind of innovative multimedia solutions which we have initiated, those same customers have gained decisive competitive advantages.

Now you can profit from our expertise.
Deutsche Telekom is Europe's No. 1 telecommunications company and the world's No. 3 network operator. Since 1990, we've invested DM 135 billion in state-of-the-art infrastructures - making us the world's biggest single investor, no less. We're ahead of the game in multimedia, online services, intelligent networks and much more. We're global, expert and experienced. And you could profit from all that.

For further information please fax to ++49 431 16 93 225 or access the World Wide Web at <http://www.dtag.de>.



معلومات الاصل

brother
Porsche moves faster on top team

COMPANIES AND FINANCE: EUROPE

Italian IT group tries to reassure investors and regulators

Olivetti promises finance details in early October

By Andrew Hill

Olivetti yesterday tried to reassure investors and Italian stock market regulators that its half-year accounts were in order, but refused to detail its plans for disposals or strategic alliances.

It refused to reveal information about ongoing negotiations on alliances or disposals, because publication of such data "would be extremely damaging".

Institutions press for disposal strategy

By William Lewis in London and Andrew Hill in Milan

Members of a group of institutional shareholders who hold collectively about 25 per cent of Olivetti's equity said yesterday they were likely to call an extraordinary general meeting if the company failed to meet their concerns.

Head of PC unit upbeat

By Paul Taylor

The fortunes for Olivetti's personal computer business - one of Europe's last remaining broad range computer manufacturers - have been written many times.

half of this year on sales of L15.8bn - a performance described by Olivetti as a great improvement on "the disaster of 1995".

Overall, Olivetti sold nearly 1m PCs last year. It is particularly strong in Italy, where it has about a 17 per cent market share, and in the UK, France, Scandinavia and Germany.

Mr Faial Shakerchi, head of European equities at Old Mutual, which holds about 2 per cent of Olivetti and is a member of the shareholder group, said yesterday that "the value in the company needs to be realised".

Bertelsmann cools on pay-TV

By Frederick Stüdemann in Berlin

Bertelsmann, the German media group, said yesterday it was scaling back its digital pay-TV activities in the wake of recent setbacks in the German market.

Benz InterServices (Debis), a unit of Daimler-Benz, are meeting in Bonn today, when Telekom will formally announce its withdrawal from the company.

Table with 5 columns: Company, Earnings, Profit, ROCE, ROE. Rows include Deutsche Telekom, Bertelsmann, etc.

mann would give up its involvement in the development of set-top decoders, which are needed to receive digital signals, and in the establishment of a proprietary broadcasting platform.

SBC tackles problems at home

By William Hill in Zurich

It used to be easy to be a pigeonhole in the Big Three Swiss banks.

Over the past couple of years, SBC has strengthened its international investment management business, with the \$750m acquisition of Gary Erisson's US money management firm and the \$800m (£1.34bn) purchase of S.G. Warburg, the UK merchant bank.

Table with 3 columns: Metric, Value, Change. Rows include Return on Assets, Return on Equity, etc.

returns on domestic Swiss banking are minimal. In SBC's case, the position is even worse. It is the smallest of the Big Three, yet has the biggest branch network.

off private banking as a separate unit, and yesterday's announcement is primarily concerned with addressing the problems of the core domestic business.

Provisioning for loan losses reformed

By George Graham, Banking Correspondent

Swiss Bank Corp's new method of provisioning for loan losses is part of a radical transformation of banks' techniques for managing their risks.

credit risk accounting reserve. SBC will also inject SF2.2bn this year into the reserve to set up a cushion, because actual losses in any given year will vary from the expected trend.

lished one, so will raise interest rates. A number of North American banks, such as Bank of America and Bank of Montreal, adopt similar techniques for their loan books.

Mercedes pins hope on Actros

Mercedes-Benz, the world's biggest truckmaker, hopes to turn a corner in its financial fortunes with the Actros heavy truck range, which will make its first public appearance at the Hannover truck show, opening to the press today.

information about the performance of the commercial vehicles operations has always been obscure, because the division's results are merged with those of Mercedes-Benz's highly-profitable car side.

Mercedes-Benz has already taken steps to turn round its high-cost European commercial vehicle manufacturing operations, which are concentrated in Germany.

Such practices were no longer acceptable, he implied. Mercedes-Benz has already taken steps to turn round its high-cost European commercial vehicle manufacturing operations, which are concentrated in Germany.



Actros: Mercedes hopes range will add DM500m to profits

Smart car venture running on schedule

By Haig Simonian, Motor Industry Correspondent

Europe's riskiest new car project, the Smart venture between Mercedes-Benz and Switzerland's SMH watchmaker, is on track to build its first vehicles by autumn next year, in spite of doubts about its viability.

Hambach, north-eastern France, MCC said the 10 component suppliers largely responsible for building the car would start training employees next month.

Advertisement for GOLD FIELDS CORPORATE SERVICES LIMITED, including details of a dividend payment and contact information.

Advertisement for Polytechnic International Finance B.V., offering financial services and listing an appointment.

Advertisement for Société Générale ahead at midway, detailing the bank's performance and expansion plans.

Handwritten text at the bottom of the page: "مستغانم الاصل"

COMPANIES AND FINANCE: ASIA-PACIFIC

NZ airline given qualified go-ahead on Ansett

By Bruce Jacques in Sydney

The Australian government has approved the A\$475m (US\$375m) acquisition of a half-share in Ansett, the Australian airline, by Air New Zealand - but with conditions that will force a new shareholding structure on the companies.

The Australian treasurer (finance minister), Mr Peter Costello, said the purchase,

from Australian transport group TNT, was subject to a number of conditions to ensure it complied with air traffic regulations.

He said if Ansett retained its status as a designated Australian international airline, its international operating arm, Ansett International (AIL), had to be substantially owned and controlled by Australians.

AIL would, therefore, be required to retain its head

office and operational base in Australia, with at least two-thirds of its board, including the chairman, to be Australian citizens.

Also, 51 per cent of AIL's capital must be owned by an Australian holding company - which will be called Holdco - and owned 100 per cent by Australian citizens.

No further details of the proposed shareholding or board members of Holdco were released, but Mr Cos-

tello said approval for involvement in the company would be subject to regulatory processes. Ansett will control the remaining 49 per cent of AIL.

Mr Ken Cowley, the chairman and chief executive of Ansett Australia, yesterday welcomed the government's decision.

Mr Cowley, who is also Australian head of Ansett's other 50 per cent shareholder, News Corporation,

said the government had faced a complex array of regulatory issues. He said he looked forward to early resolution of the Air New Zealand purchase.

The deal still has to be approved by a meeting of Air New Zealand shareholders, scheduled for September 27, which will also be asked to approve enabling funding arrangements.

Air New Zealand's chief executive, Mr Jim McCrea,

said the conditions appeared acceptable and workable.

The Ansett-Air New Zealand deal was first broached two years ago when News Corp signalled its intention to sell its Ansett stake.

Protracted negotiations ultimately foundered on price. However, within weeks, Ansett's other 50 per cent shareholder, TNT, was in talks to sell its stake. The deal has been dogged by regulatory hurdles.

ASIA-PACIFIC NEWS DIGEST

Merck and Chugai form OTC venture

Merck, the US pharmaceutical company, will team up with Chugai Pharmaceutical of Japan in a joint venture to develop and market over-the-counter drugs in Japan. The move will give Merck access to Japan's rapidly growing OTC drug market, which is the focus of government moves to cut health care costs.

Merck already has a Japanese pharmaceutical subsidiary - Banyu Pharmaceuticals, which concentrates on prescription drugs - which will not be affected by the tie-up. For Chugai, the agreement offers ties with a leading global drug-maker at a time when the government's cut in official drug prices is eroding profitability and partners are being sought ahead of a possible consolidation within the industry. Some foreign companies have taken leading stakes in small Japanese drug manufacturers.

Chugai will provide 70 per cent of the ¥2.5bn (\$22.7m) capital of the new company, which will be based in Tokyo. The joint venture will start operations next spring. *Emiko Terazono, Tokyo*

Pacific Andes launches IPO

Pacific Andes International Holdings, the Hong Kong listed company whose interests include frozen seafood and shipping services, yesterday launched the initial public offering of its newly spun-off arm, Pacific Andes Holdings. The company opted for a Singapore listing because of the city-state's position as an Asia-Pacific financial centre. Sixteen other Hong Kong companies have listings in Singapore, most notably the Jardine group of companies which delisted from Hong Kong in two stages, in December 1994 and February 1995.

Pacific Andes Holdings' activities are similar to those of its parent's. The listing is in two tranches, each of 30.62m shares at US\$0.57 each. One tranche is being sold by the parent while the other is made up of new shares. A total of US\$33m will be raised, although only half of this will accrue to the new company. Following the issue, the parent will hold 60 per cent of Pacific Andes Holdings.

Proceeds from the sale of new shares will be channelled into expanding processing capabilities, buying a plant in China, and developing own-label food products. *Louise Lucas, Hong Kong*

Orogen Minerals float priced

The Papua New Guinea government will float part of Orogen Minerals, the holding vehicle for its interests in the country's main resource projects, at A\$1.70 a share, raising A\$280m (US\$206m). Sir Julius Chan, prime minister, said the government would retain 51 per cent.

Orogen's interests include stakes in some of the world's largest gold projects, including 15 per cent of the Porgera mine, 20 per cent of Misima and 6.6 per cent of Lihir. Its assets, housed in the government-controlled Mineral Resources Development Company, also include 15.75 per cent of the Kutubui oil project and 20.5 per cent of the Gobe oil operation. A successful float would give Orogen a market capitalisation of A\$600m. It will also have the right to take up interests in new resource projects in Papua New Guinea. However, it appears the vehicle does not include the government's interests in the Ok Tedi and Bougainville projects.

The float will offer 158m shares, with residents offered a discount for the first 2,000. A global institutional offering will also be made through depository receipts. *Bruce Jacques, Sydney*

MasterCard takes the Chinese challenge

Credit card group sees the potential and the problems of this fast-growing market

Eugene Lockhart, president of MasterCard International, faces a question similar to the one confronting many chief executives dealing with China: what resources does one commit to a market which may be growing exponentially but is not yet providing returns that would justify a larger investment?

For many companies - including MasterCard - the Chinese market still requires a leap of faith. An uncertain regulatory environment, chaotic trading conditions and shifting consumer patterns make it difficult to plan and set targets.

But Mr Lockhart, a former chief executive of Midland Bank in the UK, believes it is in MasterCard's interest to make substantial additional commitments to China.

"We plan to make further considerable investment in China," he says, "both in terms of human resources and in money spent on publicity programmes and advertising."

However, he says there has to be a "critical moment" - the point when it is decided whether returns justify resources committed. "It is a challenge for every western company involved in China to balance market-building with achieving strict financial targets."

The explosion in the issuing of bank cards, the moves to transform China from a "cash-based" to a "cashless"

society, the internationalisation of the economy, the huge potential growth in outward tourism as the Chinese become more affluent, and the changing attitudes to credit are all exciting developments for companies such as MasterCard, Visa and American Express.

In the 10 years since China's first yuan-denominated bank card was issued in June 1986, the number of cards in circulation has grown to 14.1m, and is expected to reach 200m by 2003. Transaction volume is also increasing dramatically, from just \$2.5m in 1991 to \$115.8m in 1995.

MasterCard has every reason to be satisfied with its penetration of the market. At the end of 1995, it accounted for 69 per cent of the market, or 9.8m cards. In terms of transaction volume, MasterCard represented 61 per cent, or \$71.7bn. Its main competitor, Visa, holds about 20 per cent market share.

The potential of the Chinese market would seem difficult to ignore for a company like MasterCard. Transaction volume in China is already more than 10 per cent of its global figure of \$500bn, of which the US accounts for \$175bn. Numbers of MasterCard cards issued in China represent about 3 per cent of the company's \$40m total worldwide.



Eugene Lockhart plans further investment in China

But this is only the beginning, and China's moves towards currency convertibility will have considerable implications for companies like MasterCard. Initially, current account convertibility will be limited to foreign-invested enterprises, but gradually full convertibility will be introduced. The yuan will in time become an internationally tradeable currency, possibly by 2000.

In the meantime, foreign credit card companies will be hoping the authorities relax restrictions on Chinese citizens' access to credit cards that can be used internationally. As things stand,

Chinese who travel frequently are obliged to service such cards from accounts outside China. MasterCard representatives have told the authorities that rules discouraging Chinese from holding offshore accounts denominated in foreign currencies to service credit cards are detrimental to China's interests. Mr Lockhart makes no secret of MasterCard's interest in seeing regulations relaxed. "For us this would represent a great first step towards seeing a rate of return."

The MasterCard chief sees the main growth area for MasterCard in the early stages in the debit/ATM

(automatic teller machine) card market, because of the Chinese attachment to cash. Smart cards, or integrated circuit cards, also have considerable potential in a "cash-driven" society.

IC cards are being trialled in China's southern provinces, and are expected to spread rapidly throughout the country once given approval. The Chinese, worried about security, would be attracted to the IC card's safety features.

International credit card companies such as MasterCard and Visa are also keeping a close eye on China's much-vaunted Golden Bridge project, originally meant to provide a "super-highway" clearing system for both bank cards and non-bank cards by 2003.

But teething problems mean the project will probably take longer. In the meantime, the People's Bank of China's newly-established National Bank Card office has taken over responsibility for bank cards. Banks themselves are setting up their own bank card clearing systems, a vote of little confidence in the Golden Bridge project. The danger for China is that it will end up with a "dysfunctional" clearing system.

Mr Lockhart, on the other hand, is optimistic that order will be brought to potential chaos. "I've been impressed on a lot of different fronts by the aggressiveness of the Chinese to do the right thing and their concern about getting the right infrastructure in place."

Tony Walker

home

reformed

venture scheduled

midway

Ask most banks how you should invest to preserve your assets and you'll likely hear that a balanced diet is best for your long-term financial health. Good advice. But sound diversification requires much more than a little of this, more of that, and a taste of something else. That's where the personalized private banking philosophy of Bank Julius Baer can help. Instead of offering just pre-packaged investment recipes, your personal Baer advisor will make an in-depth appraisal of your current situation and goals, and then select and blend the resources of the Julius Baer Group into a creatively structured solution that positions you for long-term, after-tax performance. At Bank Julius Baer, wealth management is our strength. Personalized service is our commitment. Just call Zurich: Joseph A. Belle (+41-1) 228 55 59 Geneva: (Société Bancaire Julius Baer) Candace Wehbe: (+41-22) 317 64 18 London: Julian Yorke (+44-171) 623 42 11



What's cooking in your portfolio?

JBcoB BANK JULIUS BAER The Fine Art of Swiss Private Banking Group Presence: Zurich Geneva London New York Frankfurt Vienna Lugano Monaco Guernsey Montreal Grand Cayman Palm Beach Los Angeles San Francisco Mexico Hong Kong http://www.juliusbaer.com Issued and approved by Bank Julius Baer & Co. Ltd. - Regulated by the BFA and Member of the London Stock Exchange

Technology has won. You'll always find Belleli Group on the market thanks to banking and creditors. BELLELI GROUP - Italy

COMPANIES AND FINANCE: INTERNATIONAL

Tambrands to shut plants in shake-up

By Richard Tomkins in New York
Tambrands, the US maker of Tampax, the world's top-selling tampon...

However, the company's share price jumped 2% to \$44 in early trading after Tambrands said the restructuring would bring pre-tax savings of \$20m a year from the beginning of 1998...

fell from \$94m to \$74.7m last year, and the slide continued into this year's first half. Underlying net profits were down from \$44.5m to \$36.6m in the six months to June.

out four of its nine world-wide manufacturing plants and concentrating production in the remaining five. Those closing are in Rutland, Vermont; Tours, France; Tipperary, Ireland; and St Petersburg, Russia.

world-wide workforce. The company also announced that Mr Edward Fogarty, chief executive, would take the additional post of chairman, succeeding Mr Howard Wentz, who is retiring at the age of 66.

PepsiCo in moves to strengthen management

By Richard Tomkins
PepsiCo, the US soft drink and food company that has been hit by a series of setbacks, yesterday surprised Wall Street by bringing in a consumer industry heavyweight to strengthen its management team.

the US food company, where he became chief financial officer. In 1989 he joined R.R. Nabisco, the US tobacco and food group, where he became co-chairman and chief executive.

enzuelan bottler defected to Coca-Cola, and the month before, the head of the group's international soft drinks business unexpectedly resigned.



ROC improves terms of offer for Chateau

By John Authers in New York
ROC Communities, the Colorado-based real estate investment trust (reit), yesterday announced that it had improved its offer to merge with Chateau Properties of Michigan.

and legal changes. The merger now only needs the approval of a majority of the Chateau common shareholders who vote, rather than two-thirds of all the company's outstanding shares.

Laidlaw to receive \$1.7bn from sale of solid waste unit

By Bernard Simon in Toronto
Laidlaw, the Ontario-based waste and transport services group, will receive almost US\$1.7bn in cash and securities for its solid waste business from Allied Waste Industries of Arizona.

position in that market," he said. The deal will leave Laidlaw as the largest single shareholder in Allied, with a 20 per cent stake.

self rather than commit itself to the substantial investments needed to compete with WMX and Brown-Ferris Industries, which dominate the North American industry.

Ford arm to set up bank in Poland

By Kevin Donohue, East Europe Correspondent
Ford Credit Europe, the US carmaker's finance arm, is setting up a banking subsidiary in Poland and is seeking to expand its financing operations into Hungary and the Czech Republic...

Aerospatiale back in profit early

Aerospatiale, the French state-owned aerospace group, yesterday provided a fillip for the French government by confirming it had returned to the black much earlier than originally expected.

Renault cost-cutting on target

Renault, the French carmaker, is "on target" to meet its goal of reducing its average production cost per car by FF3,000 - or roughly 8 per cent - by the end of next year.

Weaker rand helps Sasol

Sasol, the South African synthetic fuels producer, showed the benefits of the weaker rand by announcing a robust increase in full-year profits. Operating profit from synthetic fuel operations was 23 per cent higher at R1,51bn (\$338m).

Iscor hit by falling demand

Iskor, the South African steel producer, announced a drop in full-year profits and warned of a further decline pending a recovery in international steel prices.

Tabacalera agrees Koipe deal

Tabacalera, the state-controlled Spanish tobacco company, said it had agreed to sell its stake of almost 10 per cent in Koipe, the country's leading edible oil concern.

Royale Belge up 13.7% midway

By Neil Buckley
Netherlands-based subsidiary UAP Nieuw Rotterdam, formed from two groups of which Royale Belge took control of last year. The Dutch operations - now the eighth-largest insurer in the Netherlands - reported a jump in net profits from FF1.8m to FF12.8m (\$15.7m).

Mr Gérard added that Royale Belge was constantly looking at opportunities outside Benelux, particularly in Scandinavia. The group said strong performances in both the Belgian banking and insurance sectors had led to the first-half improvement.

MINORCO NOTICE TO HOLDERS OF BEARER SHARE CERTIFICATES PAYMENT OF COUPON NO. 18

VASAKRONAN USD 300,000,000 Revolving Credit Facility

HMC FINANCING 3 PLC and Marabeni International Finance plc

Wide interest in OTE venture

OTE, Greece's state telecoms company, said yesterday that 15 North American, Asian and European operators were interested in a joint venture to set up the country's third mobile telephony service.

Zurich Insurance ahead 32%

Zurich Insurance, the Swiss insurance group, said its first-half net profit rose 32.7 per cent to SF767.4m (\$492.30m).

Banco di Napoli cuts loss

Banco di Napoli, the Italian bank, posted a pre-tax first-half loss of L674bn (\$441.7m), against a deficit of L1,580bn last year.

IRI warns of deficit

IRI, the Italian state holding company, said it was forecasting a 1996 parent net loss of L2,900bn (\$1.9bn) compared with a year-earlier loss of L3,455bn.

Pathé

Not income for the first six months of this year at Pathé, the French media group, was FF1,32m (\$26.03m) compared with FF740m for the first half last year, not as reported in yesterday's FT.

COMPANIES AND FINANCE: UK

Next shares slip in spite of 12% rise in interim profits

By Christopher Price

Strong high street demand and the growing popularity of home shopping helped Next, the retail group, post a 12 per cent rise in pre-tax profits to £58m (£57.4m) in the six months to the end of July.

The rise was masked by an exceptional gain in last year's figures and operating profits rose 31 per cent to £49.8m.

Turnover rose 23 per cent to £406.4m. However, disappointment among some analysts over the rise in like-for-like sales, concerns over the consumer recovery and profit-taking combined to knock the shares, down 25.5p to 374.5p.

Next's cash pile rose from £12m to £14.5m but Lord Wolfson of Sunningdale, chairman, was quick to damp speculation that Next was building up a war chest for an acquisition.

5 per cent of our market capitalisation and supports our very progressive dividend policy. It also gives us flexibility for any other opportunities, such as the investment in our new distribution centre."

He also dismissed suggestions of a tie-up between Next's mail order business and the catalogue division of Great Universal Stores, a company he also chairs.

The high street retail business lifted operating profits 37 per cent to £30.1m on sales up 23 per cent at £273.2m. Mr David Jones, chief executive, said the retail environment was improving, although trading remained "challenging" in some areas.

Next added an extra four stores year-on-year, and improved sales per square foot from £24 to £28. Lord Wolfson said that, with 306 stores, the group had



David Jones: trading remains challenging in some areas

reached near-saturation point in the UK and the challenge was in better use of space and expanding, where possible, existing stores.

Further growth was predicted for the Next Directory business, which increased operating profits 42 per cent to £11.8m on sales 23 per

cent higher at £90.4m. Next has also begun a personal loan scheme which had attracted £30m of business in its first few months. The company experienced mixed results overseas, despite sales growing 31 per cent.

Lex, Page 19

Fall in price of copper costs Wassall £8m as it slips 8% to £22m

By Ross Tieman

Falling copper prices cost Wassall £8.1m in the first half of 1996, leaving pre-tax profits at the conglomerate 32 per cent lower at £22.4m (£34.9m).

But a 32 per cent rise in underlying operating profits, a 35 per cent interim dividend increase to 2.1p, and an upbeat statement helped the shares rise 15p to 307.5p.

Brokers said that despite the setback from copper prices, Wassall was still showing strong earnings growth. "These were very, very good results," said Mr Robert Morton of Charles-Horse-Trevelyan.

Down. Despite its difficulties over raw material prices, General Cable, the US manufacturer of household wiring and telecommunications cables, acquired in June 1994, now accounts for the lion's share of Wassall's profits.

It recorded a 54 per cent rise in operating profits, to £17.9m. Its sales were £345.5m in the six months to June 30, against £297m for the group as a whole.

Since December 1995, copper prices have fallen from 135 cents a pound to about 95 cents - a similar level to that prevailing in mid-1994.

General Cable buys some \$300m of copper a year and stockpiled work in progress amount to about a quarter of that by value.

Prices of finished products are based on the previous day's copper price. So the risk of any rise or fall in

copper prices between the beginning and end of the manufacturing process is taken by Wassall.

Aided by lower prices, demand for cable is now rising strongly, said Mr Christopher Miller, chief executive. DAP, Wassall's US manufacturer of household fillers and sealants, lifted operating profits by 29 per cent to £4.5m. The closures business, which produces 7bn plastic and aluminium bottle caps every year, saw operating profits stand still at £6m.

Mr Miller said the company's outlook was "very positive and gives us great confidence for the future". With net debt set to fall below £30m by the year end, Wassall was well placed to spend up to £200m acquiring more under-performing "mid-technology" companies, he said.

Pressure increases on Keptit to detail its plans

By Roger Taylor

The directors of Keptit are coming under pressure to publish full details of their plans to break up the £500m (£780m) fund. If they do not, investors may instead opt to accept a hostile bid for Keptit from a rival fund, TR European Growth.

In a move designed to ward off the Treg bid, Keptit, the Kiewit investment trust, announced two weeks ago its intention to break up the fund and pay cash back to shareholders.

But Treg has refused to withdraw its bid and contin-

ues to challenge Keptit to publish full details of its proposals.

One large investor in Keptit said yesterday it had decided to accept the Treg bid, because the directors were taking too long to publish their plans. The investor, a large institution which did not wish to be named, holds less than 3 per cent of the fund.

Most institutional investors are still thought to be against the Treg bid. At the first closing date for the bid only 1.02 per cent of shareholders had accepted.

Keptit described the result as dismal, but Treg has

decided to keep its bid open until October 4.

Both Keptit and Treg are offering to sell off the fund's assets and pay cash back to shareholders. Both are also offering shareholders an alternative investment fund. However, the winning plan will be the one which pays the highest cash value.

Keptit's plans involve lower costs than Treg's and so are expected to produce more cash. Because the break-up plans involve selling a large portfolio in one go, the assets will have to be sold at a discount to the market price, likely to be about 3 or 4 per cent.

Biotech group works on pig clone

By Simon Kuper

PPL Therapeutics, the Scottish biotechnology company that genetically engineers sheep to produce medicines in their milk, is hoping to announce a collaboration with a British academic group offering new technology to prevent humans from rejecting pig hearts, kidneys and possibly lungs.

PPL, which floated in June and has produced a cloned sheep called Tracy, aims also to clone pigs with organs suited to humans.

Mr Ron James, managing director, said xenografts - animal-to-human transplants - could be "potentially more significant" for PPL than its lead product AAT, with applications in treating cystic fibrosis.

Mr James said US companies would probably achieve the first pig-to-human transplants in about two years. However, he added: "Our second generation products may be better than their first generation."

The waiting list for organ transplants was 20 times longer than the number of people who received transplants.

The number of organs available for transplant had fallen since motorcyclists had been made to wear helmets, he said. US hospitals charged each other about \$15,000 per organ for transplants.

The company hoped to find a marketing partner for AAT "somewhere at the end of 1997 or in 1998". AAT was expected to reach the market in about five years.

The company announced a pre-tax loss of £1.69m (£587,000 profit) on sales down 35 per cent at £2.18m for the first half of 1996.

Interimdividend 1996. The Board of Management of Royal PTT Nederland NV (KPN) has set the 1996 interim dividend at NLG 1.- per ordinary share in cash. The Board has declared that 62 dividend rights will entitle shareholders to one ordinary share of NLG 10.- par value. The number of dividend rights has been established based on the closing price of KPN shares on the Amsterdam Stock Exchange on September 16, 1996.

Crédit local de France GENERAL MEETING OF BONDHOLDERS Notice of Meeting. For the purpose of the alliance with Crédit Commercial de Belgique, Crédit local de France will transfer to its subsidiary Local Finance all of its assets and liabilities, including all bonds issued by Crédit local de France.

MERRILL LYNCH EQUITY/ CONVERTIBLE SERIES. Société d'Investissement à Capital Variable Registered Office: 69, route d'Esch, Luxembourg R.C. Luxembourg B-29815. NOTICE TO SHAREHOLDERS. Shareholders are kindly invited to attend the general meetings to be held at the offices of Banque Internationale à Luxembourg S.A., 69, route d'Esch, Luxembourg on Friday, 27th September, 1996, at 4.00 p.m. with the following agenda:

The Financial Times plans to publish a Survey on Spanish Banking and Finance on Tuesday, October 15. For more information on advertising opportunities in this survey, please contact: Ewa Placzek-Neves Tel: +44 (0) 171 873 3725 Fax: +44 (0) 1717 873 3934 or Edward Macquisten or Maria Gonzalez: Tel: +341 337 0061 Fax: +341 337 0062 or your usual Financial Times representative.

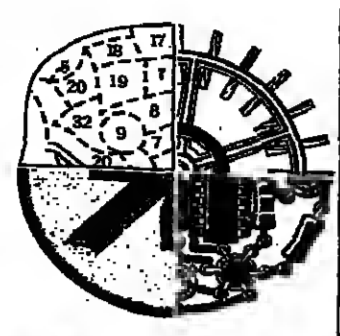
NOTICE TO BONDHOLDERS OF Acer Incorporated US\$45,000,000 4 per cent Bonds due 2001 (The "Bonds"). Further to the notice to Bondholders dated May 13, 1996 relating to the conversion of the Bonds, this is to inform you that the Shares or Bonds received upon conversion of the Bonds may, at the election of Bondholders, be deposited into a depository receipt facility in exchange for global depository receipts ("Share GDRs").

British Rail Proposed Sale of National Railway Supplies. National Railway Supplies (NRS) is a business unit within the Central Services Division of British Railways Board and is being offered for sale. Based at Crewe with subsidiary operations at York and Highgate, NRS provides a supply chain management and repair service to the rail industry in Great Britain including the supply of a wide range of signalling, telecommunication, permanent way and other infrastructure products.

معلومات التمويل

TECHNOLOGY

Worth Watching - Vanessa Houlder



Order out of disorder

US researchers are using entropy, the natural tendency towards disorder, to create order on a microscopic scale, according to a report in today's Nature magazine.

When particles of two different sizes are dispersed in a liquid, there is an attractive force between the larger particles. As the larger particles approach one another, the extra volume created for the smaller particles serves to increase the system's entropy as a whole.

Cool head in theatre

The clothing worn by surgeons to protect them from infection during an operation can become uncomfortably hot. 3M has designed a material that allows heat to escape while maintaining a barrier to micro-organisms.

viruses, such as those responsible for Hepatitis B and AIDS, while letting through water molecules that carry heat away from the body.

New line in telephones

A German telephone manufacturer has designed a phone that doubles as a cordless and a mobile phone. The phone uses normal lines in the home and a cellular network elsewhere.

Lift which takes the strain

Getting up after a fall is often difficult for elderly or disabled people. Even a companion may be unable to help, as lifting somebody unaided puts a heavy strain on the back.

The Elevator has a plastic seat shaped so that that it takes very little effort to roll the person on to it. The person is then swung into a seated position by inflating a bag underneath the seat, with the help of a hand pump or a motor.

The device, which will be manufactured by Cane & Able of Chesterfield, near Sheffield, will cost about £450 for the model with a manual hand pump, and £750 for the electric pump version.

The long development road of the motor industry has been littered with so-called "miracle" engines, promising everything from perpetual motion to the ability to run on water.

Most have been swept into wayside rubbish bins for the simple reason that significant advances in engine technology are overwhelmingly the result of painstaking, persistent and expensive further development of known concepts.

Now the world's first full production version of the "direct injection" petrol engine is going on sale in Japan, under the bonnet of Mitsubishi Motors' new-generation Galant saloon and Legnum estate car ranges.

Mitsubishi has high hopes that the engine's advanced characteristics will have such strong appeal to technology-obsessed domestic buyers that it will almost single-handedly revive the company's declining sales inside Japan, before going on to win substantial sales in export markets.

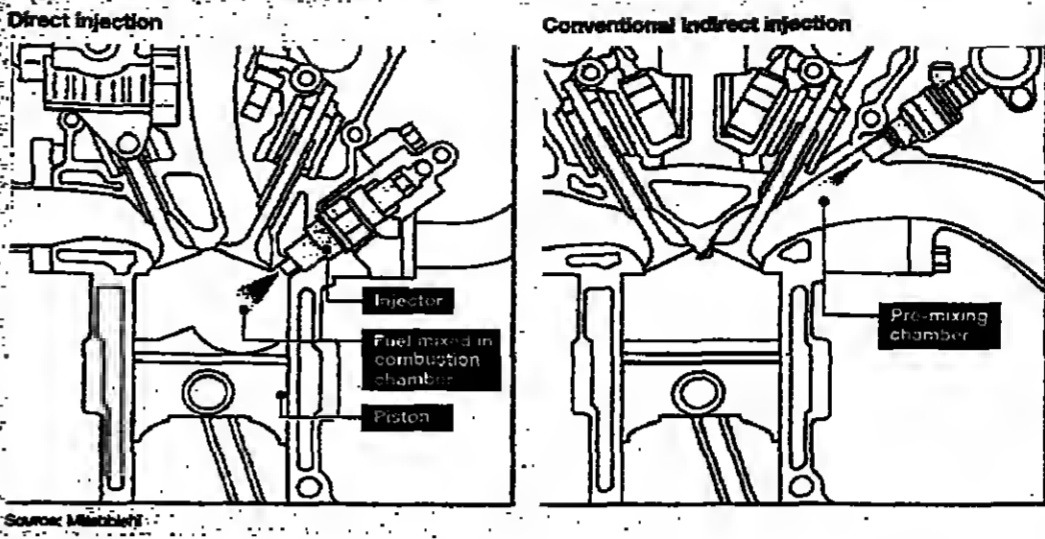
While the engine will make its debut in the Galant and Legnum, Mitsubishi is committed to spreading the technology to every vehicle it produces, including the Charisma and Volvo 94 cars built at VolvoCar, Mitsubishi's and Volvo's joint venture in the Netherlands.

In spite of the often extravagant claims made for new engines, the fuel economy and performance claims made for Mitsubishi's engine do represent a quantum leap, combining the fuel economy of a diesel engine with the performance of a sporting petrol motor.

Better yet, from Mitsubishi's point of view, none of the world's leading carmakers is about to rubbish the claims. "It's fair to say that direct injection marks the next big step forward for the petrol engine, as big as the first shift from carburetors to fuel injection," according to Jim Clarke, chief engineer, advanced engines, at Ford's power train division in Dearborn.

Not so good for Mitsubishi is that its pioneering technology will not be alone in the marketplace for long. Toyota has already announced a "publicity pollster" in the middle of Mitsubishi's launch by declaring that its own direct petrol engine would be launched in home

How the new engine works



The full production version of a direct injection petrol engine is a leap forward, says John Griffiths

An engine revolution

market cars and Corona models by the end of the year. Over the next five to 10 years, direct petrol injection technology can be expected to permeate much of the new-car market, acknowledges Clarke. He will not, however, predict when Ford's first "DI" petrol model will take to the roads. "Of course we are working on it, just like every other major auto maker," he says.

The first Mitsubishi unit is an in-line, four-cylinder engine of 1.8 litres, with four valves per cylinder operated by twin overhead camshafts. That is no different

from most modern petrol engines. The first spectacularly distinguishing feature is a compression ratio of 20:1, almost double that of conventional, indirect injection petrol engines. Not surprisingly given such a ratio, the engine packs an explosive punch: its 150-brake horsepower output is higher than Mitsubishi's current 2-litre conventionally-injected engine.

market cars and Corona models by the end of the year. Over the next five to 10 years, direct petrol injection technology can be expected to permeate much of the new-car market, acknowledges Clarke. He will not, however, predict when Ford's first "DI" petrol model will take to the roads. "Of course we are working on it, just like every other major auto maker," he says.

The first Mitsubishi unit is an in-line, four-cylinder engine of 1.8 litres, with four valves per cylinder operated by twin overhead camshafts. That is no different

from most modern petrol engines. The first spectacularly distinguishing feature is a compression ratio of 20:1, almost double that of conventional, indirect injection petrol engines. Not surprisingly given such a ratio, the engine packs an explosive punch: its 150-brake horsepower output is higher than Mitsubishi's current 2-litre conventionally-injected engine.

Vauxhall gets personal

Vauxhall, General Motors' UK cars subsidiary, has spent \$3m on new technology to "personalise" its telephone customer service.

The system, set up in Luton, identifies callers from their number and displays on a video terminal their details their vehicle's history.

It automatically directs the caller to the Vauxhall employee who has dealt with him or her in the past. People calling for the first time will be logged into a central database so that they will receive the same personal service in the future.

CONTRACTS & TENDERS
GOVERNMENT OF JORDAN
PRIVATIZATION OF TELECOMMUNICATIONS CORPORATION
INVITATION FOR EXPRESSIONS OF INTEREST FOR FINANCIAL ADVISORS

LEGAL NOTICES
Beneficial
Guaranteed Floating Rate Notes due 1998

THE WALPOLE COMMITTEE
PROMOTING BRITISH EXCELLENCE
THE WALPOLE COMMITTEE IN NEW YORK
Established in 1992 The Walpole Committee's mission is to promote British Excellence.

OBITUARY
BILL BIRD
formerly London Stock Exchange
died 13th September after painful illness, bravely borne.

The Financial Times plans to publish a Survey on Manchester
on Wednesday, October 23

INTERNATIONAL CAPITAL MARKETS

D-Mark securitisation taps seven-year sector

INTERNATIONAL BONDS By Samer Iskandar

There was no sign yesterday of any slowdown in bond issuance. Although several deals competed for size and originality, a repackaged securitisation issue in D-Marks for Bank America Credit Card Corp managed to combine both.

ING Barings arranged the first public securitisation in markets for the government housing agency. The result was Femica No 2, a two-tranche deal for a total of Fm1.45bn. According to the lead manager, demand was motivated by recent redemptions as well as the government's decision to scale down its issuance programme. The floating-rate tranche, aimed at banks and corporate investors, met stronger demand than the fixed-rate bonds, typically the domain of pension funds and life assurance companies.

The issuer said the bonds were aimed at retail investors, who typically appreciate relatively high coupons. The slightly unusual maturity of the bonds, two years and two months, is partly explained by an arbitrage opportunity requiring a match with an existing dollar-denominated asset, leading ultimately to "satisfactory sub-Libor" funding costs, DePa said.

New international bond issues

Table with columns: Issuer, Amount, Coupon, Price, Maturity, Yield, Spread, Bookrunner. Lists various international bond issues from issuers like SLL, SLL, SLL, etc.

Final terms, non-callable unless stated. Yield spread over relevant government bond at launch supplied by lead manager. All interest payments in US dollars. For fixed-rate issues, the coupon is fixed for the life of the issue. For floating-rate issues, the coupon is fixed for the life of the issue.

US Treasuries lifted by jump in July trade deficit

GOVERNMENT BONDS

Near midday, the long bond was 5/8 stronger at 96 1/2, yielding 7.005 per cent. The two-year note was unchanged at 99 1/2, yielding 6.227 per cent. The December 30-year bond future was 3/4 weaker at 106 1/2.

The trade deficit surged from \$8.2bn in June to \$11.7bn in July - mostly because of a large increase in exports, suggesting inventories at US manufacturers may be higher than previously thought.

Trade data tend to be volatile. It should subtract from third-quarter GDP growth, but not as sharply as July data indicate, noted Mr Ed Yardini and Ms Debbie Johnson of Deutsche Morgan Grenfell in New York.

Germany falling from 218 to 216 basis points. Analysts reported strong domestic interest and pointed out that over the past couple of days some investors had switched into Spain from Italy.

French debt prices eased on the announcement of budget details, which included a forecast deficit of FF288.7bn in 1997. The figure, which will be lifted by a FF30bn social security deficit, left most economists arguing that France is unlikely to meet

the Maastricht criteria of a budget deficit no greater than 3 per cent of GDP. OATs fell 14 basis points to 102.00.

WORLD BOND PRICES

Table with columns: Country, Coupon, Red, Days, Yield, Week, Month. Lists benchmark government bond prices for various countries like Australia, Austria, Belgium, etc.

Table with columns: Country, Coupon, Red, Days, Yield, Week, Month. Lists benchmark government bond prices for various countries like Canada, Denmark, France, Germany, etc.

Table with columns: Country, Coupon, Red, Days, Yield, Week, Month. Lists benchmark government bond prices for various countries like Italy, Japan, Netherlands, etc.

US INTEREST RATES

Table with columns: Rate, Yield, Bid, Ask. Lists US Treasury and other interest rates.

UK GILT PRICES

Table with columns: Rate, Yield, Bid, Ask. Lists UK Gilt prices.

FT-ATUARIES FIXED INTEREST INDICES

Table with columns: Index, Yield, Bid, Ask. Lists FT-Atuaries fixed interest indices.

Egypt hopes to cross symbolic debt rating line

Moody's will decide if the sovereign is investment grade

A guessing game has been occupying emerging markets professionals since it became known last week that Moody's Investors Service, the US credit rating agency, had sent analysts to Cairo to work out a first rating for Egypt's sovereign debt.

But rating agencies also take into account factors such as currency risk transfer and political stability. Ms Najjar at Nomura warns that "although the fundamentals are good, the Egyptian currency is still overvalued by about 25 per cent."

Mr Mohammed Younes, head of fund manager Concord International Investments in Cairo, is very bullish on the rating. He said, based on the macroeconomic picture, he would be "very disappointed if Egypt did not get an investment grade rating, Baa1 or A3".

FRANCE

Table with columns: Country, Coupon, Red, Days, Yield, Week, Month. Lists French bond futures prices.

GERMANY

Table with columns: Country, Coupon, Red, Days, Yield, Week, Month. Lists German bond futures prices.

UK

Table with columns: Country, Coupon, Red, Days, Yield, Week, Month. Lists UK bond futures prices.

FT FIXED INTEREST INDICES

Table with columns: Index, Yield, Bid, Ask. Lists FT Fixed Interest Indices.

FT/ISMA INTERNATIONAL BOND SERVICE

Table with columns: Index, Yield, Bid, Ask. Lists FT/ISMA International Bond Service.

CONVERTIBLE BONDS

Table with columns: Index, Yield, Bid, Ask. Lists Convertible Bonds.

OTHER FIXED INTEREST

Table with columns: Index, Yield, Bid, Ask. Lists Other Fixed Interest.

DEUTSCHE MARK STRAIGHTS

Table with columns: Index, Yield, Bid, Ask. Lists Deutsche Mark Straights.

OTHER EURO STRAIGHTS

Table with columns: Index, Yield, Bid, Ask. Lists Other Euro Straights.

CONVERTIBLE BONDS

Table with columns: Index, Yield, Bid, Ask. Lists Convertible Bonds.

OTHER EURO STRAIGHTS

Table with columns: Index, Yield, Bid, Ask. Lists Other Euro Straights.

OTHER EURO STRAIGHTS

Table with columns: Index, Yield, Bid, Ask. Lists Other Euro Straights.

OTHER EURO STRAIGHTS

Table with columns: Index, Yield, Bid, Ask. Lists Other Euro Straights.

OTHER EURO STRAIGHTS

Table with columns: Index, Yield, Bid, Ask. Lists Other Euro Straights.

© The Financial Times Ltd. 1996. Reproduction in whole or in part by any means without written consent. Data supplied by International Securities Market Association.

CURRENCIES AND MONEY

Data triggers dollar drop while sterling surges

MARKETS REPORT

By Richard Adams

The dollar dipped against the other major trading currencies yesterday as news emerged that the US trade deficit had ballooned to its highest level for eight years. The wave of dollar selling sent it below 100, aided by news of a strong Japanese trade surplus. But the dollar ended the day in London at 109.07, from 110.20 the previous day.

up, worth \$1,580, from \$1,551. The sales figures kept sterling buoyant against the D-Mark, despite the dollar's fall. The pound was worth DM2.3537, slightly down from DM2.3548.

Rumours of a surprise French interest rate cut today, and the release of the French budget yesterday, left the D-Mark firm against the French franc. The D-Mark closed at FF3.407, from FF3.397, as the budget details were much as the markets expected.

The dollar's fall - ironically coming after Bundesbank council member Mr Hans Eichel said the US economy's fundamentals supported the dollar/mark exchange rate - followed the dollar's fall.

Meanwhile, rampant high street spending figures in the UK led to an initial buying surge for sterling against the dollar. Analysts said the spending figures reduced the likelihood of a UK interest rate cut. The pound closed

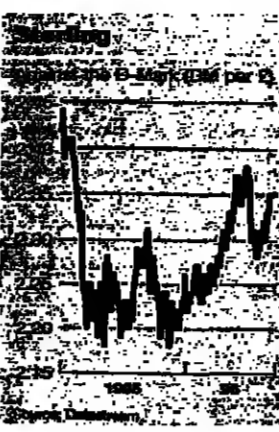
lowed news that the US trade deficit in July shot up by over 40 per cent to \$11.68bn.

The deficit was possibly the highest ever, and the largest since the current data series started in January 1992, according to analysts at HSBC Markets in New York.

Ms Patricia Eliaz, a technical analyst at MMS International in London, said the market had overbought the dollar against the D-Mark in the hope of overcoming resistance at DM15170.

"In this case, resistance held firm. The market is now looking for more selling pressure," Ms Eliaz said. She added that the failure to break the level was a bearish signal, set off by the deficit figure.

The key support levels for the dollar are at DM1470 and DM14730, and Ms Eliaz thought the dollar could trend "low on the downward trend." "The markets are choppy at the moment so



There could be a pull-back, Ms Eliaz said.

The yen's strength followed news the Japanese trade surplus for August dropped 31 per cent to \$956bn from a year ago, but well above forecasts of \$160bn to \$314bn.

There was increasing pressure on the Finnish markka, after speculation among dealers in Helsinki and Lon-

don that Finland would enter the European exchange rate mechanism during the EU finance ministers meeting at the weekend.

After Tuesday's activity - reputed to be the busiest trading day in the markka's history - the Finnish central bank cut its tender rate yesterday by 15 basis points, to 3.10 per cent. The bank was said to have intervened to keep the markka above FM30 to the D-Mark.

Mr Luis Angel Rojo, governor of the Bank of Spain, said yesterday Spain must be in the first phase of monetary union, and that it cannot count on delays in the original timetable.

Answering questions from other correspondents, Mr Rojo said Spain's 1996 budget would be 1.2 per cent of GDP, and that the government would not raise taxes.

parliamentarians, Mr Rojo said it would be "a clear mistake" for Spain not to be included in "Euro." "Trying to join is fundamental. We cannot count on their being delays. We would risk arriving late and becoming desperate. We must be included in the first phase," he said.

The peseta strengthened against the D-Mark and the dollar following Mr Rojo's comments. Against the D-Mark it finished at Pt28.115, from Pt28.22, and against the dollar at Pt126.955, from Pt127.855.

The next two monetary policy meetings between Mr Kenneth Clarke, the chancellor of the Exchequer, and Mr Eddie George, governor of the Bank of England, will take place on September 25 and October 30, according to minutes of the last meeting.

For the latest market updates, ring FT Cityline on +44 990 206909. To subscribe, call +44 171 873 4378.

POUND SPOT FORWARD AGAINST THE POUND

Table with columns for currency, closing mid-point, change on day, bid/offer spread, etc. Includes rows for Europe, Americas, and Pacific/Middle East/Africa.

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

Table with columns for currency, closing mid-point, change on day, bid/offer spread, etc. Includes rows for Europe, Americas, and Pacific/Middle East/Africa.

CROSS RATES AND DERIVATIVES

Table of exchange rates and derivatives for various currencies including USD, EUR, GBP, JPY, etc.

USD 500,000,000 BANCA DI ROMA

Advertisement for Banca di Roma featuring a large image of a building and text about depositary rate and interest period.

UK INTEREST RATES

Table showing UK interest rates for various terms like 1 month, 3 months, 6 months, 1 year.

EMU EUROPEAN CURRENCY UNIT RATES

Table showing EMU European currency unit rates for various currencies.

BASE LENDING RATES

Table showing base lending rates for various banks and currencies.

THE MOLSOL COMPANIES LIMITED

Advertisement for The Molsol Companies Limited, featuring a portrait of R. Ian Molson and text about financial services.

WORLD INTEREST RATES

Table of world interest rates for various countries and currencies.

EURO CURRENCY INTEREST RATES

Table of Euro currency interest rates for various currencies.

THREE MONTH EUROPEAN FUTURES (LFFE) DM1m points of 100%

Table of three month European futures data.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

THREE MONTH EUROPEAN FUTURES (LFFE) DM100m points of 100%

Table of three month European futures data for 100m points.

COMMODITIES AND AGRICULTURE

Gold demand 'down sharply in first half'

By Richard Mooney

The first half of this year saw a significant fall in world demand for gold, says Gold Fields Mineral Services...

FIRST HALF GOLD SUPPLY AND DEMAND (tonnes) table with columns for 1996 and 1995, and sub-columns for Supply and Demand.

decline in South African output, GFMS says. "By contrast," it notes, "the 108 tonnes of official sector sales was only around half of what was seen in the first half of 1995."

reserves in seven years. It said the gold had gone to another central bank. "In addition," GFMS says, "as further unreported sales may well have taken place during the first half of 1996, the final figure may ultimately prove to be higher than the initial estimate."

ducer hedging during the first half of 1996, hedging made little contribution to the overall supply-demand balance in the first half of this year.

result of sustained higher local prices in many markets". Dr Stewart Murray, one of the authors of the reports, suggested yesterday that "this disinvestment was primarily the product of disillusionment about gold's prospects of regaining, in the short term, the ground lost after February's price spike."

WTO farm committee faces its first challenge

Geoff Tansey on next week's Geneva meeting

When the Committee on Agriculture of the World Trade Organisation begins its two-day meeting next Tuesday in Geneva...

ers, which are separated from production decisions. Developing country members have additional exemptions, mainly covering investment, such as subsidised credit, and input subsidies, mostly for fertiliser and water.

agreement on the least developed, net food-importing countries taken when ministers signed the Uruguay Round final act in Marrakesh in April 1994.

Report dismisses silver stock 'guesstimates'

By Richard Mooney

World private sector silver stocks stand at present at somewhere between 780.3m and 1.035m troy ounces, according to CPM, a New York-based precious metals and commodities and consultancy.

that it "summarily disputes and discards the extreme 'guesstimates' circulated by groups trying to push silver prices higher or lower".

ing director Mr Jeffrey M. Christian, discussing the results of the company's latest studies this week. "What they are saying has no relevance to the silver market, and the fact that they are saying it indicates they really do not understand the parameters of market-available silver stocks."

1978-80, when silver prices rose 900 per cent, and that they have been there ever since. "The fact is that this metal, the existence of which is unsubstantiated and unprovable, has nothing to do with the market."

Comex [New York Commodity Exchange] silver deposits, effective January 1, 1997, it says. "In advance of this date, Wilmington Trust will begin reporting the amounts of silver it has in its vaults that are eligible and suitable for Comex delivery."

Copper prices rise strongly, aluminium also firmer

MARKET REPORT

COPPER prices rose strongly on the London Metal Exchange yesterday, boosted by US-led gains late on Tuesday and follow-through short-covering in subbudd trade.

tonne, up \$85. Traders were looking for more short term gains, with the next upside target at \$1,950. "The market was 'kerf' trading at \$1,925 a

had some covering today and we have also seen some trade buying coming in," said one.

ALUMINIUM prices rose with copper, the three months position gaining \$13.50 to \$1,433 a tonne. "The aluminium market was well oversold and due for a bounce," said a trader.

Compiled from Reuters

COMMODITIES PRICES

BASE METALS

LONDON METAL EXCHANGE table with columns for metal type, price, and change.

Precious Metals continued

Table with columns for metal type, price, and change.

GRAINS AND OIL SEEDS

Table with columns for grain type, price, and change.

SOFTS

Table with columns for soft type, price, and change.

MEAT AND LIVESTOCK

Table with columns for meat type, price, and change.

JOTTER PAD

Small table with columns for date and price.

PRECIOUS METALS

Table with columns for metal type, price, and change.

ENERGY

Table with columns for energy type, price, and change.

POTATOES LIFE

Table with columns for potato type, price, and change.

WHEAT LIFE

Table with columns for wheat type, price, and change.

COFFEE LIFE

Table with columns for coffee type, price, and change.

COFFEE COC

Table with columns for coffee type, price, and change.

LONDON SPOT MARKETS

Table with columns for market type, price, and change.

NATURAL GAS NYMEX

Table with columns for gas type, price, and change.

UNLEADED GASOLINE

Table with columns for gasoline type, price, and change.

INDEXES

Table with columns for index type, price, and change.

CROSSWORD

No. 9,177 Set by CINCINNUS

Crossword puzzle grid with numbers.

- 1 Place and time for a pest (6)
2 Climbed like a fish, superciliously (6)
3 One at threshold - and room for improvement (7)
4 Watch old boy attend to customers (7)
5 Bothered embarrassed a naval officer (3,7)
6 Goddess of the rain (4)
7 Leader of Sherpas on mountain top, say (5)
8 How to follow teams in a subterranean exhibition (8)
9 Worried - by sign of courage of Crane, Stephen? (8)
10 Abandon holidays? (5)
11 Mark or Cliff (4)
12 Scullery maid recalled in play (10)
13 What's left of a miners' union (7)
14 Content designer, pleasantly pungent (7)
15 Cover point with former premier (6)
16 Forestry centre goes after new sort of palm trees (6)
17 Down
18 Unattached spinster's beginning to go into town in Cornwall (5)
19 Reconstituting's scarce body (7)
20 Mary Keats, fashionable corsage? (4,6)

Handwritten text at the bottom of the page.

Offshore Funds and Insurances

FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Reip Desk on (444 171) 674 4376 for more details.

FT MANAGED FUNDS SERVICE

LUXEMBOURG (SIB REGOINISED)

Main table containing financial data for various funds and insurance companies, including columns for fund names, prices, and performance metrics.

OFFSHORE INSURANCES

Table listing various offshore insurance companies and their financial details.

Handwritten Arabic text at the bottom of the page.

FT MANAGED FUNDS SERVICE

FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (44 171) 873 4978 for more details.

Main table of fund prices with columns for Fund Name, Price, and Change. Includes sections for Global Asset Management, FT Cityline Growth Fund, and various international and domestic funds.

OTHER OFFSHORE FUNDS

Table listing other offshore funds such as ATSP Management Ltd, AXA Asset Management, and various international funds.

FAX PAYS DIVIDENDS. RIGOH. SDN Fax. Freefone 0800 303050. Large stylized text advertisement.

MANAGED FUNDS NOTES. Information regarding fund management, including details on fees, charges, and contact information for the FT Cityline Help Desk.

LONDON SHARE SERVICE

ALCOHOLIC BEVERAGES

Table listing companies in the Alcoholic Beverages sector with columns for company name and share price.

BANKS, MERCHANT

Table listing companies in the Banks, Merchant sector.

BANKS, RETAIL

Table listing companies in the Banks, Retail sector.

BREWERIES, PUBS & REST

Table listing companies in the Breweries, Pubs & Rest sector.

BUILDING & CONSTRUCTION

Table listing companies in the Building & Construction sector.

BUILDING MATS. & MERCHANTS

Table listing companies in the Building Mats. & Merchants sector.

CHEMICALS

Table listing companies in the Chemicals sector.

CHEMICALS - Cont.

Continuation of Chemicals sector table.

DISTRIBUTORS

Table listing companies in the Distributors sector.

DIVERSIFIED INDUSTRIALS

Table listing companies in the Diversified Industrials sector.

ELECTRICITY

Table listing companies in the Electricity sector.

ELECTRONIC & ELECTRICAL EQPT

Table listing companies in the Electronic & Electrical Eqpt sector.

ENGINEERING, VEHICLES

Table listing companies in the Engineering, Vehicles sector.

EXTRACTIVE INDUSTRIES

Table listing companies in the Extractive Industries sector.

ELECTRONIC & ELECTRICAL EQPT - Cont.

Continuation of Electronic & Electrical Eqpt sector table.

ENGINEERING

Table listing companies in the Engineering sector.

EXTRACTIVE INDUSTRIES - Cont.

Continuation of Extractive Industries sector table.

FOOD PRODUCERS

Table listing companies in the Food Producers sector.

HOUSEHOLD GOODS - Cont.

Continuation of Household Goods sector table.

INSURANCE

Table listing companies in the Insurance sector.

INVESTMENT TRUSTS

Table listing companies in the Investment Trusts sector.

EXTRACTIVE INDUSTRIES - Cont.

Continuation of Extractive Industries sector table.

FOOD PRODUCERS

Table listing companies in the Food Producers sector.

HOUSEHOLD GOODS - Cont.

Continuation of Household Goods sector table.

INSURANCE

Table listing companies in the Insurance sector.

INVESTMENT TRUSTS

Table listing companies in the Investment Trusts sector.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

HOUSEHOLD GOODS - Cont.

Continuation of Household Goods sector table.

INSURANCE

Table listing companies in the Insurance sector.

INVESTMENT TRUSTS

Table listing companies in the Investment Trusts sector.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

INVESTMENT TRUSTS - Cont.

Continuation of Investment Trusts sector table.

Advertisement for ORACLE, featuring the text 'In a word, ORACLE. The authority on a complete solution to effective company car finance and management.' and the ACL logo.

مكتبات الصحف

BIV TRUSTS SPLIT CAPITAL - Cont.

Table listing various investment trusts and their performance metrics, including columns for name, price, and change.

LEISURE & HOTELS - Cont.

Table listing leisure and hotel companies with their respective share prices and market movements.

LIFE ASSURANCE

Table listing life assurance providers and their financial indicators.

MEDIA

Table listing media companies and their current market status.

PAPER, PACKAGING & PRINTING - Cont.

Table listing paper, packaging, and printing companies.

PHARMACEUTICALS

Table listing pharmaceutical companies and their share prices.

PROPERTY

Table listing property-related companies and their market performance.

RETAILERS, FOOD

Table listing retailers and food companies.

RETAILERS, GENERAL

Table listing general retailers and their share prices.

SUPPORT SERVICES

Table listing support service companies.

TELECOMMUNICATIONS - Cont.

Table listing telecommunications companies.

TEXTILES & APPAREL

Table listing textiles and apparel companies.

TOBACCO

Table listing tobacco companies.

TRANSPORT

Table listing transport companies.

WATER

Table listing water utility companies.

AIM - Cont.

Table listing companies on the Alternative Investment Market (AIM).

AMERICANS

Table listing American companies listed on the London Stock Exchange.

CANADIANS

Table listing Canadian companies listed on the London Stock Exchange.

SOUTH AFRICANS

Table listing South African companies listed on the London Stock Exchange.

GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service delivered by Ecod, part of Financial Times Information. Company classifications are based on those used for the FT-SE 100 Index.

OTHER INVESTMENT TRUSTS

Table listing other investment trusts and their performance.

OIL EXPLORATION & PRODUCTION

Table listing oil exploration and production companies.

INVESTMENT COMPANIES

Table listing investment companies and their share prices.

OIL, INTEGRATED

Table listing integrated oil companies.

OTHER FINANCIAL

Table listing other financial companies.

LEISURE & HOTELS

Table listing leisure and hotel companies.

PAPER, PACKAGING & PRINTING

Table listing paper, packaging, and printing companies.

PROPERTY - Cont.

Table listing property companies.

SUPPORT SERVICES - Cont.

Table listing support service companies.

Table listing property companies.

Table listing property companies.

Table listing property companies.

Table listing property companies.

Table listing property companies.

Table listing support service companies.

Table listing support service companies.

Table listing support service companies.

Table listing support service companies.

Table listing support service companies.

AIM

Table listing AIM companies.

Table listing AIM companies.

Table listing AIM companies.

Table listing AIM companies.

Table listing AIM companies.

Table listing AIM companies.

Advertisement for Merseyside Investment Trust. Text: 'WE ARE RE-INVESTING ON MERSEYSIDE BECAUSE OF ITS TWO FUNDAMENTAL ASSETS - ITS LOCATION AND ITS WORKFORCE'. Includes contact number 0800 22 0151 and website URL.

GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service delivered by Ecod, part of Financial Times Information. Company classifications are based on those used for the FT-SE 100 Index.

FT Free Annual Reports Service

You can obtain the current annual/report of any company annotated with FT. Please quote the code FT2185. Ring 0181 770 0770 (open 24 hours including weekends) or Fax 0181 770 3822.

FT Company Focus / Focus Plus

Comprehensive 10-18 page report available on this company, containing key news stories from the last year, latest survey of City profit forecasts and investment recommendations, 5 year financial and share price performance review, balance sheet and profit and loss data, plus recent Stock Exchange announcements.

FT Cityline

Up-to-the-second share prices are available by telephone from the FT Cityline service. See Monday's share price pages for details.

FT Cityline

For readers phoning from outside UK, please dial +44 in place of the first 0.

FT Cityline

The share prices printed on these pages are also available on the internet at http://www.ft.com.

LONDON STOCK EXCHANGE

Interest rate concerns hamper UK stocks

MARKET REPORT

By Steve Thompson, UK Stock Market Editor

Any lingering hopes that the FT-SE 100 would pick itself up and make a dash for the 4,000 level before the end of the week were disappointed yesterday as convincing evidence emerged of a growing consumer-led UK recovery.

the release of the minutes of the end-July monetary meeting between Mr Eddie George, governor of the Bank of England, and Mr Kenneth Clarke, chancellor of the exchequer.

that two thirds of Fed districts favoured a 50 basis point rise in US interest rates after next Tuesday's meeting.

Never able to get into positive territory, Footsie tumbled at the outset of trading, opening almost 5 points easier. A half-hearted attempt to push on within thirty minutes of the opening quickly ran out of steam.

The strategy team at Kleinwort Benson hoisted its year-end Footsie forecast from 4,000 to 4,500. Mr Philip Isherwood at Kleinwort said that investors should "keep their eyes shut until next week", a reference to the expected turmoil in markets during Friday's big expiry, and instead focus on the excellent results season and potential for more bid activity.

BAA up on CAA hopes

By Joel Kibazo and Lisa Wood

A late run in UK airports group BAA saw the shares rise 8 1/2 to 492 1/4 in busy trade of 3.7m.

In the market following a well-received presentation at Merrill Lynch.

group P&O, which reported figures earlier this week, banded another 1 1/4 to 566p. Volume was 2.4m.

The retreat in Tibbett and Britten also hit Transport Development Group where the shares eased 4 to 187 1/2p.

The market was too great. Several other retailing stocks tumbled after profit-taking including Kingfisher, which fell 14 to 65 1/4p.

has been volatile since Tesco's new price initiative, with Asda seen by some analysts as the major potential victim.

One analyst said: "Next month should see the ending of the consultation period on the pricing formula and frankly the best option for BAA is for the CAA to confirm the formula it has already proposed.

Bass retreat

FINANCIAL TIMES EQUITY INDICES

FT-SE 100

FT-SE 250

FT-SE 100 INDEX FUTURES

FT-SE 100 INDEX OPTION

Trading Volume

Lloyds TSB dips

FT-SE All-Share

FT-SE All-Share

FT-SE All-Share

FT-SE All-Share

FT-SE All-Share

FT-SE All-Share

FT-SE All-Share

Union Limited advertisement

Berkley Futures Limited advertisement

Market Eye advertisement

Reuters 1000 advertisement

Forex advertisement

Securities and Futures Limited advertisement

Knights-Ridder advertisement

Wanted to know a secret? advertisement

Futures - Tax Free advertisement

Offshore Companies advertisement

Multipace advertisement

Signal advertisement

Petroleum Argus advertisement

FT Discovery advertisement with fisherman image

FT Gold Mines Index table

FT-SE Actuarial Share Indices table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

FT-SE Actuarial All-Share table

Additional information on the FT-SE Actuarial Share Indices...

Large table of stock prices and market data

Highs & Lows shown on a 52 week basis

WORLD STOCK MARKETS

EUROPE

Table of stock market data for Europe, including Austria, Germany, Italy, and the UK.

ASIA

Table of stock market data for Asia, including Hong Kong, Japan, and Korea.

AMERICA

Table of stock market data for America, including Canada and Mexico.

AFRICA

Table of stock market data for Africa, including South Africa.

ISLANDS

Table of stock market data for island markets, including New Zealand.

Advertisement for Rockwell: 'In the world of automotive component systems, Rockwell is world class.' Includes Rockwell logo.

Table of stock market data for Europe (continued).

Table of stock market data for Asia (continued).

Table of stock market data for America (continued).

Table of stock market data for Africa (continued).

Table of stock market data for island markets (continued).

Table of stock market data for Europe (continued).

Table of stock market data for Asia (continued).

Table of stock market data for America (continued).

Table of stock market data for Africa (continued).

Table of stock market data for island markets (continued).

Table of stock market data for Europe (continued).

Table of stock market data for Asia (continued).

Table of stock market data for America (continued).

Table of stock market data for Africa (continued).

Table of stock market data for island markets (continued).

Table of stock market data for Europe (continued).

Table of stock market data for Asia (continued).

Table of stock market data for America (continued).

Table of stock market data for Africa (continued).

Table of stock market data for island markets (continued).

Footnote and index information: 'The FTSE 100 is the index of the 100 largest companies listed on the London Stock Exchange...'

NEW YORK STOCK EXCHANGE PRICES

1 p.m. Eastern Time

Table of stock prices for various companies, including columns for stock name, price, and change. Includes sub-sections like -A-, -B-, -C-, -D-, -E-, -F-, -G-, -H-, -I-, -J-, -K-, -L-, -M-, -N-, -O-, -P-, -Q-, -R-, -S-, -T-, -U-, -V-, -W-, -X-, -Y-, -Z-.

Table of stock prices for various companies, including columns for stock name, price, and change. Includes sub-sections like -A-, -B-, -C-, -D-, -E-, -F-, -G-, -H-, -I-, -J-, -K-, -L-, -M-, -N-, -O-, -P-, -Q-, -R-, -S-, -T-, -U-, -V-, -W-, -X-, -Y-, -Z-.

Table of stock prices for various companies, including columns for stock name, price, and change. Includes sub-sections like -A-, -B-, -C-, -D-, -E-, -F-, -G-, -H-, -I-, -J-, -K-, -L-, -M-, -N-, -O-, -P-, -Q-, -R-, -S-, -T-, -U-, -V-, -W-, -X-, -Y-, -Z-.

Table of stock prices for various companies, including columns for stock name, price, and change. Includes sub-sections like -A-, -B-, -C-, -D-, -E-, -F-, -G-, -H-, -I-, -J-, -K-, -L-, -M-, -N-, -O-, -P-, -Q-, -R-, -S-, -T-, -U-, -V-, -W-, -X-, -Y-, -Z-.

Table of stock prices for various companies, including columns for stock name, price, and change. Includes sub-sections like -A-, -B-, -C-, -D-, -E-, -F-, -G-, -H-, -I-, -J-, -K-, -L-, -M-, -N-, -O-, -P-, -Q-, -R-, -S-, -T-, -U-, -V-, -W-, -X-, -Y-, -Z-.

Advertisement for Hewlett-Packard with the headline 'Race to Market' and the URL 'http://www.hp.com/go/computing'. Includes the HP logo and the text 'If the business decisions are yours, the computer system should be ours.'

Handwritten Arabic text at the bottom center of the page.

Continued on next page

NYSE PRICES

Table of NYSE stock prices including columns for stock name, price, and change. Includes sub-sections for 'Continued from previous page' and 'AMER PRICES'.

NASDAQ NATIONAL MARKET

Table of NASDAQ National Market stock prices, organized into columns with stock names, prices, and changes.

home

reformed

venture

midway

Advertisement for 'Financial Times' featuring the 'timand.' logo and text: 'Have your FT hand delivered in... Gain the edge over your competitors by having the Financial Times delivered to your home or office every working day.'

Dow weakens on interest rate jitters Paris enlivened by Alcatel rebound

AMERICAS

Profit-taking and interest rate concerns sent US shares modestly lower in mid-session trading on WALL STREET as investors awaited the outcome of Tuesday's meeting of the Federal Reserve's Open Market Committee...

EUROPE

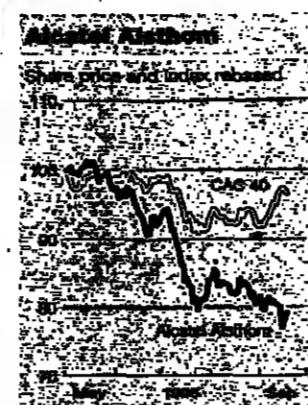
Budget details and the currency markets kept French traders pinned down yesterday and PARIS traded narrowly in dull volume in spite of a number of strong individual performances...

ASIA PACIFIC

TOKYO saw profit-taking by domestic institutions after two consecutive days of steep gains, and the Nikkei index closed the day down 0.7 per cent...

SOUTH AFRICA

After two days of gains, shares in Johannesburg ran on a bit of steam with both industrial and mining stocks moving lower in thin trading volume...



FT-SE Actuaries Share Indices

Table with columns for Market, Open, High, Low, Close, and Change. Includes indices for Europe, Asia Pacific, and South Africa.

THE EUROPEAN SERIES

Table with columns for Date, Open, High, Low, Close, and Change. Lists various European stock indices.

Mexico City reverses decline

Mexico City reversed an early fall as foreign bargain hunters stepped in after Wall Street moderated its recent gains. The IPC index picked up 11.03 to 3,364.82 at mid-session...

BUENOS AIRES

BUENOS AIRES was flat in hesitant trade ahead of the congressional debate on tax reforms. The Merval index stood 0.80 higher...

SAO PAULO

SAO PAULO was weak at mid-session, continuing Tuesday's decline on lingering worries over US interest rates. The Bovespa index fell 129 to 64,995.

Nikkei runs into domestic profit-taking

TOKYO saw profit-taking by domestic institutions after two consecutive days of steep gains, and the Nikkei index closed the day down 0.7 per cent...

ASIA PACIFIC

TOKYO saw profit-taking by domestic institutions after two consecutive days of steep gains, and the Nikkei index closed the day down 0.7 per cent...

AMSTERDAM

AMSTERDAM traded quietly, with the AEX edging lower in thin volume. It closed off 1.11 at 563.16.

BRUSSELS

BRUSSELS featured a star performance by Tractebel, the utility holding company, that jumped BFX700...

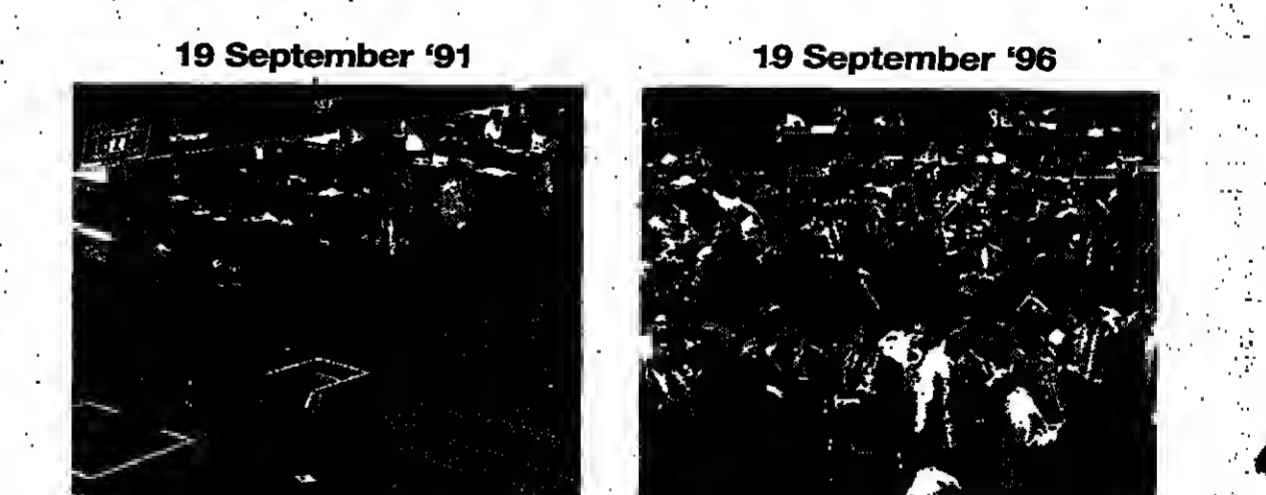
EMERGING MARKETS: IFC WEEKLY INVESTABLE PRICE INDICES. Table with columns for Market, No. of stocks, Dollar terms, and Local currency terms.

Greek shares continued on an uncertain path yesterday ahead of Sunday's general election, leaving the Athens general index down 3.17 at 965.47. Since the election was announced, the market has had a strong run...

FT/SE ACTUARIES WORLD INDICES. Table with columns for NATIONAL AND REGIONAL MARKETS, US, and DOLLAR INDEX.

by banks and overseas investors. Sanwa Bank rose Y70 to Y2,060. The stock is scheduled to be included into the Nikkei 225 average next Tuesday and domestic investors with index-linked investments as well as brokerage dealers placed buying orders...

Happy 5th Birthday LIFFE BTP



Average daily volume 1991: 7,905 contracts. Average daily volume 1996: 54,242 contracts.

Thank you to all market participants for contributing to this outstanding success.

For further information and free data disks contact Cinzia Botteccchi or Francesco Margini on +44-171 329 2467/2762 or alternately view the LIFFE web site - http://www.liffe.com.

Vertical advertisement on the right edge of the page, partially obscured and containing various text and graphics.